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The Condition of the Building Industry

With Especial Regard to the Shortage of Skilled Labour and the Increased Cost of Building Work

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[*Read before the Royal Institute of British Architects on Monday, 14 December 1925.*]

ON one previous occasion only I think—at least during recent years—has the Council of this Institute considered it opportune that its members and other parties interested should, within these walls, be given an opportunity to focus their attention upon a matter having for its purpose a general survey of the condition of the building industry, with a view to determine whether the existing difficulties with which the industry is beset can be overcome to the lasting satisfaction of all concerned.

To this end I might express the hope that out of the multitude of counsels gathered here to-night will come wisdom.

Within the scope of a single paper it might be wearisome for you were I to attempt more than to touch upon many of the contributing causes to the present position. For this reason I shall concern myself chiefly with the *main* causes and effects.

Resulting from my investigations, I have formed the opinion that the chronic troubles from which the industry has suffered during recent years are not so much due to particular incidents or disputes, to special points of difference between the parties regarding what might at such times appear to be the cause for such disputes, as to the fact that there is underlying these disputes a deeply rooted feeling

(frequently shared by both masters and men) that hardships and grievances are permitted to continue because no sufficient attempt has been made in the past to tackle fundamental conditions. On this account many of the so-called settlements of past disputes have in effect been merely a postponement of the matter until such time as one side or the other considered the occasion most favourable to its cause. The result has been that for a long time “feeling”—active or latent—has manifested itself within the industry. In such cases delay has not healed the wound but, on the contrary, has caused it to fester with a tendency to become poisonous.

It is no new expression of opinion that “conditions in the industry are worse to-day than ever they were”—even the youngest of us have heard it before. We have to-night to consider whether or not there exists any foundation for that statement. If there is, it behoves us to examine all constructive proposals put forward which have for their object the betterment of these conditions. The existing agreements between the employers and employees expire in February of next year. It would seem, therefore, that now is the opportune time to give calm, quiet and deliberate thought to our subject. For some time past there has been an expressed desire for “a new spirit in industry.”

generally. Can we continue to view with complacent satisfaction this growing desire without ourselves making a serious attempt to encourage this new spirit within the industry with which we are connected? I think not.

This question of "a new spirit in industry" is not a new one—indeed, it is very old—but it claims our attention on new ground. It is a question of business, not of sentiment. It has been forced to the front by the economic situation of the country, especially in regard to foreign competition and export trade, which has compelled a general recognition of the need of more efficient—that is, economically efficient—production, and of industrial peace as an indispensable condition for securing it. Probably no one will deny that economic recovery is dependent on those conditions; but at that point opinions begin to diverge, and they separate, as usual, into two extremes with a middle section between them. On what we may call the extreme right there are employers of the old school who hold that if only trade unionism is kept in its place and they are allowed to run their businesses as they please, all will be well. On the extreme left are those who call the present economic situation the breakdown or collapse of Capitalism, and maintain that nothing less than a complete transformation of the existing order will be of any avail. The policy of the first, if effectively carried out, involves turning back the course of social evolution and reverting to a past order, which is no more possible to-day than the restoration of the feudal system. The policy of the other offers no real remedy. The theory that public ownership and control would inevitably secure the superior economic efficiency that we need is supported by no material or convincing evidence.

There remains the middle course, which is, in effect, the one that at similar times of reconstruction has generally been followed at least in this country—namely, the gradual modification of existing conditions by ameliorative measures. But it is evident that this policy, as hitherto pursued, will not suffice. Something more is needed to promote that effective co-operation of the factors engaged in production which is seen to be necessary. The cry for a new spirit in industry is a recognition of this truth. Such a spirit is a necessary preliminary because it supplies the motive power of action, and without a change of

spirit there can be no real change of form; but it must take a concrete shape to be effective. What shape? That is the practical question. There can be no uniform plan, but there is a uniform principle, which is perhaps expressed by the word "collaboration" as well as by any other. This is an essential condition of all good work done by men in concert. To produce the best result there must be the will to work together for it, and that is not secured by the pressure of circumstances or coercion by authority, but by a common feeling and a common interest. The common feeling depends on the human relationship; the common interest on the economic principle. It cannot be maintained that either has been satisfactory in the past or is at all generally satisfactory now; and this is the reason for what in another industry—as recently as 1919—was called the "psychology of low production." It is a question of motive in industry. A solution of all the other difficulties would be no solution for this one.

The motive is the heart of the problem. For the best work there must be an adequate motive, and it will not be forthcoming without a change both in the human and in the economic relationship. The first concerns personal treatment. Authority and discipline there must be in all concerted operations; but they can be exercised in different ways, as they actually are in different establishments. In some there is incessant trouble, in others none at all. In the former case employers put it all down to agitation (and sometimes that is a principal cause), but more often it is due to someone wielding authority and exercising it in a harsh manner. To be effective the change of attitude must be generally recognised and observed. With regard to the economic relationship, what is needed is such an interest in the prosperity of the business as will induce all those engaged in it to do their best, or at least such a direct reward for effort as will elicit the best. A combination of the two is the most complete solution of the problem. It is in this direction that American industry has taken so marked a lead. Effort is encouraged and interest in the common prosperity secured by commensurate reward.

THE GENERAL ORGANISATION FOR THE MANAGEMENT OF THE INDUSTRY.

It has become the custom—by accident, I think rather than by design—for representatives

of the employers and employees alone to deal with matters concerning the more practical and material side of the industry, probably because they represent the parties most directly concerned. So long as the machinery thereby set up has functioned for the general well being of the industry, it might be reasoned that he was a meddlesome busybody who would venture to introduce changes from the outside. It is a generally accepted axiom that onlookers see most of the game. Were we architects but mere onlookers I venture to think that from that standpoint alone a good and sufficient reason could be stated for our venturing an expression of view as to how best the game might be played. We are, however, not mere onlookers, but active participants in all the good and ill which befalls the industry. Yet how little we know about the causes and effects of certain fundamental conditions, the reasons why disputes arise, tending to acute feeling and sometimes ending in strikes ; which, in turn, are settled upon terms of which we know not until at breakfast or in the train we scan our morning newspaper !

We architects—and I would include in these remarks the quantity surveyors also—are, as it were, the third in a group of four—employers, employees, professional men and the community—who are interested in the welfare of the industry. The professional class by virtue of the position it holds is at once concerned with safeguarding the public interests, which interests are in no way inimical to but are in very fact the essential interests of the industry, the prosperity of which in the widest sense is dependent upon its possession of the public confidence. The interests of all parties concerned are therefore fundamentally alike.

To give and to receive the fullest measure of benefit the industry as a whole should be happy and contented, the crafts sound and skilful ; production should be smooth, steady and economic.

Can we architects play any useful part in creating such conditions ? In the past attempts have been made to this end. These attempts, however, have failed to achieve any great measure of success.

Trying to forget the past, is the time ripe to make a further and this time a successful effort to get together and pull together in an attempt to improve conditions and remove evils which are known to exist ?

As a prelude to our own efforts let us consider in

passing what has been the result elsewhere of certain experiments along the lines I have in mind.

Mr. Robert D. Kohn, Chairman of the Committee on Industrial Relations, American Institute of Architects, in a letter to the *Architectural Association Journal* under date 19 June 1925, regarding a report of the Architectural Association's general meeting on 27 April this year, writes as follows :—

" The report of your meeting and the discussion thereon by members of your Association seem to indicate that the situation in England with regard to the relations between architect, building labour, and the builder do not vary greatly from those that pertain in the United States. Here, too, we have until recent years had a series of disagreements between the building crafts workers and their employers, the causes of which were unknown to the architects or ignored by them, and indeed it appeared as if neither party to these controversies wished to recognise the interests of anyone else in either the cause or the result of their quarrel. Sometimes when the situation became serious either labour or the employers would call upon the public to support their just (?) contentions, but as a general rule the disagreements were fought out privately, and sometimes the public interest was totally ignored or sacrificed in the terms of the final settlement.

" In the last few years we have made a beginning towards a change in this procedure. Reference is made in your report to the appearance of Mr. Malcolm Sparks on one occasion before your organisation. We are glad to acknowledge our indebtedness to Mr. Sparks, for the plan of co-operation between the various elements of the building industry upon which we have embarked in the United States was primarily inspired by his efforts to organise the Parliament of the Building Industry in England during the war. As far as I can discover, his war-time effort has left no permanent organisation of similar character in England. It inspired a movement, however, in this country which is carrying on with great success.

" I refer by this to the ' Congress of the Building Industry ' which was started in 1920 in a preliminary way in this country, and which in the last three years has developed into a group of local organisations in half a dozen of our more populous communities ; New York, Boston, Philadelphia, Portland (Oregon), Seattle and the State of New Jersey.

Each of these organisations includes within its membership what we call the technique of the industry (the architects and the engineers), the labour of all the crafts of the industry, the builders (here called general contractors), the sub-contractors, the building material manufacturers or producers ; the building material distributors, and finally, the representatives of finance principally interested in building loans.

" We are, therefore, gradually developing here through these local organisations a medium of co-operation between the various elements that jointly render a certain service to the public, and this co-operation enables each different function within the building process better to understand all the other functions within the process. Already each of these local groups has developed a system of apprenticeship training in the building crafts. This enlistment into and training for the industry is one of our most important problems as it is with you. Time and again in different places efforts have been made to start systems of apprenticeship training through either the joint efforts of the labour organisations and employers or by these two groups with the co-operation of the local education boards. Frequently these efforts have failed. Since the Congress of the Building Industry has been formed renewed efforts in this direction have been undertaken under the guidance of the architects and with the co-operation of the other elements previously mentioned as being part of these groups (and with the local education boards).

" Just as an illustration of the results attained in three brief years of work I may cite that in New York City alone the number of apprentices being trained in various crafts has increased from a few hundred to two or three thousand. Here, too, there are restrictions by unions upon the number of apprentices to be introduced into any craft, but the neutral investigations conducted by our ' Congress ' groups have shown that, as with you, there were in no trade as many apprentices being trained by the employers as were permitted by the union rules. Nor have we yet, even with our large increase above recorded, reached the maximum permitted by the unions. Time enough to discuss these rules when this limit has been reached. Indeed, it is only fair to say that we frequently find a more ready response from labour in the matter of starting apprenticeship training than we get from the employers.

" Apprenticeship training is only one of the many educational efforts undertaken by the Congress groups, educational in the sense that they educate the participants in the efforts rather more than those ostensibly to be benefited. Seasonal unemployment ; unfair practices on the part of builders or of labour ; inadequate performance on the part of the architects ; industry codes of ethics ; surveys of likely shortages of materials or labour, are all topics that engage various Congress committees in the different cities.

" It must not be supposed that what we have done here has been all plain sailing or that we have solved the problem of industrial relations in the building industry in the United States. We have hardly scratched the surface of the problem. But we are certain we have started in the right direction. The fundamental principle announced in the declaration of purpose of each of these Congress groups is that the object to be attained is the study of the functioning of the building industry through the joint effort of all of the elements that are necessary to the industry so that the mistakes and the difficulties may be done away with that lie in the way of an adequate service of the industry to the public.

" I hesitate somewhat to impose upon your time this statement of an experiment which is after all only in its beginnings. By doing so can only be justified by two facts. One is that after all the inspiration for this move came from one of your own war-time experiments, and the other is that the results of our three or four years' effort have already proven that this scheme of building industry organisation in which the architects have taken a hand has produced what we may call a by-product even more important than apprenticeship training, the doing away with seasonal unemployment and the correction of unfair practices within the building industry. This more important thing which has been accomplished, and which is recognised by hundreds of architect members of these Congress groups, is that the work done jointly on these various committees by architect, engineers, labour men, building trades employers and others interested in building work has established between the individuals thus working together an understanding of and a sympathy with each other's problems, of the functioning of the industry as a whole and of the relation of any one part to the whole, which unquestionably will result in a willingness to be

more reasonable when those difficulties arise. This realisation of a common purpose is in itself the most important thing that we think we have accomplished. It is the recognition of the fact that the architect needs this kind of education as much as anyone else that has caused the American Institute of Architects to instruct the committee of which I happen to be chairman to encourage its members to invite the co-operation of others in the building industry to help in the formation of 'Congress' groups, such as I have described, in every part of the country."

I cannot help feeling that if possessed of "the will to win," a similar body set up in this country could and would do much excellent work. I further feel that unless some such body is created, and *can be made to work in the right spirit*, we must be prepared to face in the future continued trouble and controversy.

I cannot speak for my friends the Quantity Surveyors, but I believe I am expressing the views of many members of this Institute when I say that we now are, as we have always been, ready and willing to play an earnest part in any such movement. Clearly we cannot move alone, nor of our

own initiative, but if an invitation is extended to us by the other interested parties we shall not decline to give of our best to help in a further endeavour to find a way to lasting peace and prosperity in the industry.

We will now pass on to consider the main causes for the difficulties and dissatisfaction within the industry, and at the same time examine a few suggested remedies. These difficulties may comprehensively be grouped under five heads:—

1. Shortage of Skilled Labour.
2. Casual Nature of Employment.
3. Wet Time.
4. Output.
5. High Costs.

1. The marked shortage of skilled labour has manifested itself mainly since the war—it has, however, been going on since at least 1901—and is at once the direct or indirect cause of many of the other difficulties in the industry. It has caused considerable inconvenience to the building public, who have in consequence been unable to count upon the normal progress of building operations. This has resulted, on the one hand, in the postponement of

TABLE I.*—SHOWING A COMPARISON IN THE NUMBERS OF CRAFTSMEN EMPLOYED IN THE BUILDING INDUSTRY.
COMPILED FROM FIGURES EXTRACTED FROM THE CENSUS RETURNS OF 1901, 1911 AND 1921.

Occupation	Number of Males employed in the following Crafts under seven age groups.								Decrease, 1911-1921	Decrease, 1901-1921
	Under 20	20-24	25-34	35-44	45-54	55-64	Over 64	Total		
Bricklayers	1901	—	—	—	—	—	—	115,995	15,315	28,558
	1911	3,850	8,034	31,028	21,993	19,350	13,117	102,752		
	1921	6,769	4,345	11,721	25,300	18,597	13,786	6,919		
Masons ..	1901	—	—	—	—	—	—	73,012	16,340	42,289
	1911	2,237	3,646	11,880	9,421	9,528	7,168	47,063		
	1921	1,646	1,111	3,797	8,106	6,934	5,876	3,253		
Carpenters and Joiners	1901	—	—	—	—	—	—	270,660	3,070	64,736
	1911	18,604	22,921	53,822	36,754	36,479	26,688	13,727		
	1921	26,008	16,082	37,001	47,832	33,438	29,025	16,539		
Plasterers	1901	—	—	—	—	—	—	31,301	5,281	11,500
	1911	1,100	2,130	7,927	4,645	4,759	3,299	1,222		
	1921	1,646	1,107	2,793	5,888	3,560	3,185	1,622		
Painters and Decorators	1901	—	—	—	—	—	—	160,201	27,371	5,959
	1911	14,801	19,831	47,618	42,021	32,400	18,441	6,501		
	1921	12,311	10,905	31,210	36,884	32,755	21,501	8,676		
Plumbers	1901	—	—	—	—	—	—	64,924	15,849	15,805
	1911	11,634	9,598	17,449	12,353	8,367	4,201	1,366		
	1921	8,856	4,972	10,742	10,991	7,716	4,326	1,516		
Total decrease								83,226	168,853	

* Compiled by Mr. A. Legge, Organiser, National Federation of Building Trades Employers, from figures extracted from Census returns.

work which might have been undertaken had the industry been better able to tackle it, and, on the other hand, where the speedy erection of business premises has been of vital importance, the ensuing delay caused by protracted building operations has resulted in serious loss of interest upon capital, as well as loss of prospective revenue from the proposed undertaking. The delay caused in making good the shortage of houses is so well known generally that I need not here dilate upon it nor upon its consequent bad effect upon social conditions.

In all cases where the supply of a commodity falls far short of the demand the immediate result is a rise in prices. To so high a level did the prices reach in 1920-2 that building ceased to be an economic proposition except in a few outstanding cases. To some extent costs have since been reduced, but public confidence has not yet been fully restored. While it cannot be held that shortage of labour has been or is the sole cause for this state of affairs, it has nevertheless been a potent factor. Table I (compiled from the census returns) shows under seven age groups a comparison in the number of craftsmen employed in the industry in the years 1901, 1911 and 1921.

In 1924 the Ministry of Labour compiled some statistics for the purpose of the Government's housing scheme (see page 129) representing the number of insured persons in the building trades during the years 1913-1921 and 1924. These figures vary considerably from those shown in Table I. The figures on this table might therefore be considered to include persons registered under the census in the various trades mentioned, many of whom were either not then so employed, or were not then engaged in the building industry.

From Table I it will be seen that there were engaged in the industry in 1921, 168,853 fewer skilled operatives than in 1901, representing a general decrease of about 24 per cent.

The table shows a decrease in the various crafts as follows :

	Decrease.	About per cent.
Bricklayers	28,558	24
Masons	42,280	61
Carpenters and Joiners	64,735	24
Plasterers	11,500	34
Painters and Decorators	5,959	4
Plumbers	15,805	24

These figures appear to indicate that with a decline of 61 per cent. masonry is a comparatively dying craft. This is probably true only so far as the

provinces are concerned. Every observant traveller has during recent years noticed—with feelings of regret—that the use of bricks, roughcast and similar materials, have to a large extent taken the place of stone in many of the districts where hitherto building in stone—at least so far as the external walls were concerned—had been a tradition. The character of these districts is suffering accordingly, and architects might on these two grounds well consider the desirability of making every effort towards a rebirth of this craft. In London it is probable that stone is as much in use as previously.

The plastering craft, with a decrease of 11,500 operatives—representing an average of 34 per cent.—is to-day clearly much below economic strength. Shortage in this craft is having a detrimental effect upon the industry generally by delaying normal progress not only so far as plastering work is concerned, but by the resultant delays and disorganisation which inevitably affect the other trades following in its wake. It would appear that this craft is badly in need of additional apprentices with a view to increasing the number of operatives. In the meantime the industry would be helped if as a temporary measure—say, for one year—longer hours were worked in this craft. It behoves the responsible parties to use every effort to bring the craft up to the requisite standard on at least two grounds (a) that until normal progress can be made with this section of the work joiners, painters, plumbers, and general finishing crafts must inevitably suffer inconvenience and ultimately a measure of unemployment; (b) that if no other remedy is forthcoming in due course the market demand for the commodity will be met by the development in various forms of substitutes both in men and materials, some of which are already making their presence felt.

The bricklaying, carpentering and plumbing crafts show a decline of 25 and 24 per cent. respectively. The effect of the shortage is most marked in the bricklaying craft, which operates detrimentally in the same manner as I have endeavoured to indicate in regard to plastering, but to a greater degree, inasmuch as this craft operates in the *earliest* stages of building work and the progress of a greater number of "following" crafts is thereby hindered.

In addition, there is another aspect of this question of shortage which must be noted. A reference to the age groups in Table I goes to show that, side

by side with a decrease of 83,226 skilled workers in the industry between the years 1911 and 1921, there appears during the same period an increase of 7,146 (about 23 per cent.) in the number of skilled workers over the age of 64 years. From the figures above quoted and from those included under the age group, 55 to 64 years, there emerges one very clear indication: that wastage during the next five to 10 years must inevitably be high.

TABLE II.—COMPILED BY MINISTRY OF LABOUR IN 1924.

Showing the number of *insured* persons in each trade at the dates mentioned.

	December	October	January	Decrease	1913-1924
	1913	1921	1924	1913-1924	
Carpenters	126,780	132,250	125,010	1,770	1·5%
Bricklayers	68,920	62,170	57,170	11,750	17%
Masons ..	38,870	23,880	22,270	16,000	42%
Slaters ..	6,650	5,370	5,210	1,440	23%
Plasterers ..	20,180	17,080	16,070	4,110	20%
Painters ..	130,860	115,900	106,860	24,000	18%
Plumbers ..	36,860	35,840	34,440	2,420	7%
Totals	429,120	392,500	367,030	62,090	

It will be seen that these figures vary considerably from those given in Table I. The general conclusions drawn from the latter table, however, apply also in principle to the above table, but the totals and percentages would be different.

In connection with these figures it must also be borne in mind that the hours now worked—45 per week, compared to 1914, 53 per week—shows a fall of 15 per cent. in hours worked.

I think I have produced sufficient evidence to show the extent of the shortage of skilled craftsmen in the industry generally and that this falling off has been going on steadily since at least the census of 1901. Further investigations are necessary to discover the causes before we apply ourselves to solutions. For instance, we find that the falling off has not affected the whole country in the same manner. Until recent years—say the past ten to fifteen years—London and the other large cities were able to count upon a steady supply of the right kind of craftsman from the less populated centres in the provinces, satisfactorily to fill a large proportion of the normal vacancies occurring in the industry. Owing to a variety of reasons—among which are emigration and the general levelling up of rates of wages in the graded provincial areas—this source of supply has during recent years shown so marked a falling off that it can now practically be ignored in our consideration of the problem of the shortage of skilled craftsmen in the large cities. For all prac-

tical purposes, therefore, we might now consider the industry to be similarly affected throughout the country.

A general survey of the prospective supply of labour goes to show that in London, at least, there are more boys who wish to enter the industry than there are available vacancies, whereas in the provinces generally the reverse appears to be the case.

Where the supply of prospective labour is short the principal reasons given why young men do not enter the industry are stated to be as follows:

1. The Casual Nature of Employment.

2. The Comparatively Low Level of *Net Wages* (having regard to time lost during the year owing to the casual nature of employment, insecurity of tenure, "wet time," and other causes).

3. The Small Increase of Wages of Skilled Men over the Wages Paid to Unskilled Workers, and to the relatively high wages obtainable by unskilled boys in what might be termed "blind alley" occupations.

4. National Unemployment Pay for Persons under 21 Years of Age.

5. The Supposed Social Inferiority of Workers in Manual Trades Generally. (This is accentuated by the tendency of elementary school masters to encourage boys to enter clerical occupations with a view to indicate the high social standard of the school.)

All of these objections can with co-operation and determination be mitigated or overcome.

In an attempt to discover the most satisfactory solution to the problem of shortage of skilled labour (with which is closely allied the general improvement of conditions within the industry) five possible methods of entry into the industry might be examined.

1. Apprenticeship to a Building Trade Employer.

2. Tuition in a Trade School, including indentures.

3. Over Age Apprenticeship.

4. Promotion from Labourers.

5. Dilution.

Of these five methods Nos. 1 and 2 appear to offer the most satisfactory means whereby the shortage can be overtaken.

The fullest possible development of the apprenticeship system, together with that of training in technical schools, is both urgent and vital if the existing

shortage is to be supplemented by bringing into the industry the right type of young man. From the examination of much data I have formed the opinion that hitherto the system of apprenticeship has not been developed to nearly its full extent.

At the present time there exists between the employers and employees an arrangement by which no employer may engage apprentices in any craft in excess of one to seven of the journeymen employed by him, with a maximum of eight apprentices in each craft. To the credit of the parties to the agreement it should be stated that this limitation has not been too rigidly observed, or the position to-day would be worse than we find it. Yet whereas in certain cases a greater proportion of apprentices has been agreed to at the instigation of certain firms—in consequence of which a greater number of apprentices are now being trained than probably at any time during recent years—there exists, nevertheless, a real difficulty in obtaining in sufficient numbers lads to follow the various trade crafts in the industry, with the single exception of the carpentering and joinery craft. So far as can be ascertained there are at present in London about 800 lads serving the usual five years apprenticeship course in the various crafts, 160 of whom (on average) will be available each year as journeymen. In addition there are about the same number of improvers, mainly boys without indentures and others, who are suffering some measure of disability. In addition there are in the various trade schools about 140 to 160 lads being trained for a period of three years. This, on an average, would indicate a total number of about 370 young journeymen likely to enter the various crafts in the London area each year. The wastage from various causes I have computed to be at least 800 to 1,000 journeymen each year. It will therefore be seen that at the present rate about 33 per cent. only of the normal vacancies in London can be filled by apprentices now being trained.

In order to increase the number of apprentices with a view to overtaking the existing shortage of labour, it would, I think, be well to consider—at least for a stated period of, say, 5 years—(a) the advisability of amending the existing rules in order that individual firms might take an unlimited number of apprentices, provided the agreed ratio of apprentices to journeymen (1 to 7) was not thereby exceeded; (b) That the Employers' Federation should bring to the notice of its members in par-

ticular and to the industry in general the vital necessity of encouraging the apprenticeship system by urging master builders to train a greater number of young men in the various crafts, in particular those crafts in which from time to time the shortage of skilled workers is most marked; (c) That the notice of the Elementary School Authorities be drawn to the prospects in the industry for young lads when nearing the age for leaving school. In this direction stimulus might be provided if suitable propaganda work were undertaken in important centres of population; (d) That greater encouragement be given to apprentices to supplement the knowledge gained by them in the workshops and on the jobs by attendance at technical schools at least on certain evenings each week, and if possible one whole day per week during, say, the three or four years of their apprenticeship. It is generally acknowledged that operatives who have received technical school training in addition to working in the shops and on the job become far better fitted ultimately to occupy the positions of foremen, clerks of works and master builders. To this end added encouragement would be given if the Federations of Employers and Employees could see their way to grant a suitable sum for prizes and scholarships to students at recognised schools. I would add that in the event of the Federations adopting some such scheme perhaps the Council of the R.I.B.A. might consider the desirability of associating itself with such an educational project. In cases where an apprentice showed marked ability and progress as a result of supplementing workshop training with technical school study, his period of apprenticeship might be accordingly reduced; (e) That wages paid to apprentices should not bear unfavourable comparison with those obtainable by lads in unskilled trades.

The desire for a general improvement in the status of the industry I have already dealt with.

(3) Over age apprenticeship has, I believe, had some measure of consideration as a temporary means of providing additional craftsmen. By this method the prospective craftsman would be bound under a form of indenture providing for a minimum period of three years training. Of this period it appears to be advisable that one year at least should be spent in a trade school, where a curriculum suited to this special section should be applied. Owing to the comparatively high age—say 19-25 years—for the commencement of such indentures,

some system of payment by grant would be necessary, and this might involve a difficulty not easy to overcome, especially in view of the comparatively small numbers of craftsmen likely to be produced by such an arrangement.

(4) and (5). Promotion from Labourers and Dilution.—This is a scheme for increasing the number of craftsmen in the industry by introducing into the ranks of the skilled craftsmen a number of semi-skilled men, thereby creating additional numbers of so-called skilled workers, many of whom are not necessarily capable of executing a high standard of work. Its advocates hold that there are many operations in building works which can successfully be carried through after comparatively short training. Its opponents state that to employ upon building works men who are not well skilled in their job tends seriously to reduce not only the level of output, but also the general quality of the work. If such a scheme were adopted on anything approaching a big scale I fear that the dilutees would fail to get general employment on account (a) of the established tradition for a high standard of workmanship in the industry, (b) the disinclination of architects to produce a specification of works on a lower standard than that to which they are accustomed, and (c) the comparative failure of the scheme of dilution for ex-service men put into operation a few years ago.

(2) CASUAL NATURE OF EMPLOYMENT.

I think it will generally be agreed that, broadly speaking, a "casual labour" industry is an unhealthy and troubled industry. This was admittedly so in the past when, in relation to existing standards, the workers possessed a lower educational equipment and were less organised than at present.

The main evils of casual labour are uncertainty and waste of time and effort. Whatever may be the *rate* of wages ruling there is no certainty—on the contrary there is a grave uncertainty—that the operative will over any future period be given an opportunity to earn these wages. For the majority of men employed there is no reasonable security of continuous employment under the same employer. On the other hand, in the course of securing employment there is a constantly recurring waste of time and effort, not to mention needless expenditure upon travelling fares, meals and the like, and, most important of all, loss of morale. Nothing is

more demoralising to the average human being than the uncertainty of employment. Can it be that these conditions must in their old form continue to exist? It may be that owing to fluctuations in the public demand for our commodity these evils will never be entirely eradicated; were we, however, to concentrate upon a solution to this vexed question the evil might, I think, be considerably reduced.

One or two suggestions occur to me as being perhaps worthy of consideration:—

(a) Could not a building trade employment bureau be set up in all large centres of population whereby employers seeking men and operatives seeking employment could obtain mutual advantages? Surely it would be more economically sound if employers or their foreman on the one hand were able to notify such an establishment of their labour wants, say, two or three days ahead, with a view to avoiding delay and to secure the more satisfactory dovetailing together of the work of the various trades! On the other hand the operatives should welcome the opportunity thereby offered in being enabled to discover at a central bureau—especially managed by the industry for the industry—the employers who at that time are wanting men, and so save time and avoid the disappointment so often now in store when walking from job to job in search of work. I gather that the headquarters of the men's Unions have attempted some such arrangement, but owing to various causes the fullest use is not made of such arrangements as exist, nor do the existing arrangements appear to be capable of development along lines which are likely to be used to the full by the parties concerned. Existing labour bureaus are not popular with either masters or men, and owing to their general nature could never impress the industry with the same degree of confidence as its own show.

(b) It has become a custom with the public to view with favour the early spring for carrying out all kinds of decorations and jobbing work. These seasonal operations need adjustment in the interests alike of the public and the industry. How often do we find householders and others delaying until the spring such operations as external painting and similar work when a glance at the condition of the woodwork, &c., clearly indicates that the materials will badly deteriorate as the result of such delay? Two coats of paint applied to bare woodwork in

the autumn is as good as four coats in the spring after the winter rains, snow and frost have done their worst. Help and advice to the public regarding seasonal operations is capable of considerable development. Timely propaganda each year would bring appropriate matters to the public notice, who would be grateful for the advice and the industry for their patronage. Organisation and wide outlook could do much to reduce casual employment.

(3) WET TIME.

For many years this has been a vexed question and the cause of constant irritation within the industry. On the face of it, it certainly seems a hardship that a section of the community should be penalised because of the misbehaviour of the weather. On the other hand the "dole" has made evident to all clear thinking people the ill effect upon human nature of substantial payment for no work. Every good foreman so arranges the execution of his job that there is in reserve under cover certain work which is done at odd times by men who would otherwise be adversely affected by wet weather. Would not a temporary covering over the building at once reduce wet time to a minimum, increase output generally and lessen costs by reducing the time needed to carry out a job? I know it is not an easy operation, but I feel that it can be done if tackled with determination.

Feeling that something more equitable might with co-operation be done, a group of architects after extensive enquiries found that a master builder in the London area had put into operation a scheme whereby all men in his employ should be paid 1s. per hour when bad weather prevented work. The builder employed on an average between 75 and 100 men. The scheme was arranged on an experimental basis by joint contributions of 6d. per week from every man employed, to which the builder added 3d. per week per man. After more than two years' working it was found that the amount paid out as "wet time" wages did not exceed the 3d. per week contributed by the employer, and during the two years a balance had accumulated amounting to about £185. This money has been used to give the men a holiday of two or three extra days—at Bank Holiday time—drawing their pay from the fund at the rate of 1s. 6d. per hour, thereby providing an unexpected opportunity for the men, together with their families, to get away for a change. I am

happy to hear that arrangements acceptable to both parties are nearing completion in regard to an official scheme for dealing with this matter.

(4) OUTPUT.

In the widest interest of the industry and the community it is clearly the duty of all parties concerned to increase output to the fullest extent consistent with good workmanship. I shall call attention to figures which appear clearly to indicate that whereas the operatives in 1925 are earning 93 to 94 per cent. more wages than in 1914, bricklayers and their labourers are actually taking longer to build a rod of brickwork. It may be that there are contributory causes other than labour to this state of affairs. Be that as it may, the present position is clearly unhealthy and uneconomic and cannot be allowed to continue. Personally I have always had in mind that men in whatever station of life should be paid in reasonable proportion to their productivity. There is something clearly wrong with the psychology of the building trade operatives if they cannot be induced by higher wages and better conditions to give in return an increase of output. Nothing short of this can be accepted. I realise, however, that to reach maximum output maximum effort must be made by both sides working in unison. Every facility as well as reward must be given to accomplish this. There must be ample materials on the job—for obvious reasons a scarcity of materials tends to slacken progress. Architects also can help considerably to this end. I doubt if we architects realise to what extent the early delivery of our $\frac{1}{2}$ in. and F.S. details, the early placing of orders for specialists and sub-contractors' goods and other matters in our control, help the builder and in turn the operative in the economic working of the job. In addition, the operations of the various trades must by foresight be made to dovetail into each other on the job without causing waste of time and a few days' "stand off."

I gather, too, that careful consideration—long overdue—is being given to such matters as economical and easily adjusted scaffolding, the easier and more speedy transmission of materials to the various positions where needed on the job. We are also giving consideration to the provision of some kind of portable bench or table the top of which would be about 2 ft. 6 in. above the level of the ground

or floor, upon which bricks, mortar and like materials could be placed and so save the effort and time expended in many cases by the constant bending of the operatives to floor level to pick up materials which should come more easily to hand. Did time permit I would wish to pursue this matter further, but I must pass on to

(5) THE INCREASED COST OF BUILDING WORK.

The main factors in the cost of building work may be set down broadly under four heads:—(1) Wages, (2) Materials, (3) Overhead Charges, (4) Profit, in the approximate ratio of 40 per cent., 45 per cent., 6 per cent. and 9 per cent. respectively. These figures will, of course, vary in each separate job.

The total increase in the cost of building work to-day compared with 1914 is approximately 105 to 110 per cent. The following table shows the rates of wages paid and the percentage of increase in the various trades in 1914 and 1925:—

Trade.	1914.	1925.	Increase per cent.
Painters	9d.	1/8 <i>1</i>	128
Labourers	8d.	1/4 <i>1</i>	106
Scaffolders	9d.	1/5 <i>1</i>	95
Masons	11 <i>1</i> d.	1/9 <i>1</i>	87
Bricklayers	11 <i>1</i> d.	1/9 <i>1</i>	87
Carpenters	11 <i>1</i> d.	1/9 <i>1</i>	87
Joiners	11 <i>1</i> d.	1/9 <i>1</i>	87
Plumbers	11 <i>1</i> d.	1/9 <i>1</i>	87
Tilers	11 <i>1</i> d.	1/9 <i>1</i>	87
Plasterers	11 <i>1</i> d.	1/9 <i>1</i>	87

The wages of operatives in the various subcontracting trades may be said to have increased at about the same rate. The general increase over the whole of the trades would therefore be about 93 to 94 per cent. These figures, however, do not indicate the total increase of wages on any particular job, which must clearly be governed by the proportion of labourers, painters, and scaffolders (whose percentage of increase is the highest) in relation to the other workers engaged upon the job.

The following table shows the approximate cost of certain building materials generally in use during the same period:—

Materials.	1914.	1925.	Increase per cent.
Blue Lian lime (ton)	2 <i>1</i> /—	5 <i>8</i> /6	179
Stock bricks (1,000)	40/—	9 <i>8</i> /6	146
Deal—Carpentry ft. cube	1/4	3/3	144
Joinery, ft. cube	2/6	6/—	140
Tiles (1,000 of 1,200)	52/6	120/—	129
Bath stone, ft. cube	1/8	3/8	120
York stone, ft. cube	2/10	6/3	120
Fletton bricks (1,000)	28/—	6 <i>0</i> /—	114

Materials.	1914.	1925.	Increase per cent.
Portland stone, ft. cube	2/6	5/3	110
Sheet lead, cwt.	25/—	50/—	100
Slates (1,000 of 1,200)	225/—	430/—	90
Sand (yd.)	7/—	13/—	86
Paint (cwt.)	46/—	82 <i>9</i>	80
Thames ballast (yd.)	6/6	10/—	54
Steel joists (ton)	170/—	260/—	53
Portland cement (ton)	36/11	60/9	65

In an endeavour to arrive at a general increase in the cost of materials it would be misleading to take all the above materials into account, for the reason that in an exceptional case only would they all be in use on one job. I have therefore, by a series of calculations, endeavoured to arrive at an equitable figure which shows the increase to be approximately 100 per cent.

We must now proceed a further stage in order to ascertain the effect of these increases on the cost of work. The table following gives figures showing in detail the approximate prime cost of materials and labour required in a rod of common brickwork in cement in London in 1914 and

1925:—

1914.	£ s. d.
4,300 Flettons at 28/- per M	6 0 5
Unloading, etc., and stacking—labourer, 7 hours at 8d.	0 4 8
3 yards sand at 7/—	1 1 0
1 ton cement at 36/11	1 16 11
Labour mixing—12 hours at 8d.	0 8 0
Scaffolding—Use and waste	0 1 3
Labour, 11 hours	0 8 3
Bricklayer, 50 hours at 11 <i>1</i> d.	2 7 11
Labourer, 38 hours at 8d.	1 5 4

1914—Prime Cost	£13 13 9
1925.	
4,300 Flettons at 60/—	12 18 0
Unloading, etc., 8 hours at 1 <i>1</i> /4d.	0 11 0
3 yards sand at 13/—	1 19 0
1 ton cement at 60/9	3 0 9
Labour mixing—13 hours at 1 <i>1</i> /4d.	0 17 10 <i>1</i> ¹
Scaffolding—Use and waste	0 2 6
Labour, 12 hours at 1 <i>5</i> ¹ ₂	0 17 6
Bricklayer, 66 hours at 1 <i>9</i> ¹ ₂	5 18 3
Labourer, 50 hours at 1 <i>4</i> ¹ ₂	3 8 9

1925—Prime Cost	£29 13 7 <i>1</i>
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It will be seen that in 1914 the prime cost was £13 5s. 7*1*d., of which amount £3 14s. 5*1*d. represented wages. In 1925 the prime cost for similar work is shown to have risen to £27 9s. 9d. and £9 9s. 6d. respectively, thereby showing that labour costs have increased 2*1*/₂ times and materials rather less than twice.

The table discloses a further matter of interest, viz., that whereas in 1914 the time allowed in

these costs for a bricklayer was 43 hours and for labourers (including scaffolders) 49 hours; in 1925 the time allowed for bricklayers has increased to 57 hours and labourers to 63 hours.

From the above table it will be further noted that if the bricklayers and labourers would build brickwork in 1925 at the same rate as in 1914 there would be a saving of £2 4s. 6d. per rod—or 24 per cent.—at to-day's wages, and in addition profit, overhead charges, etc., would accordingly be reduced. This seems to be a clear indication that there are at least some men in the boat who are not pulling their weight. I trust that the bricklayers and labourers will not feel aggrieved if I appear to have selected them as particular

transgressors. They have been mentioned incidentally because the price of a rod of brickwork readily lends itself to a simple and direct indication of the position in a vital section of the industry.

I would wish to develop further the question of costs, especially with regard to other contributory factors, but time will not permit.

I fear I have already occupied too much of your time. If, however, our meeting here to-night results—as I trust it might—in our giving renewed thought to a subject of vital interest to us all and to the public, perhaps in due course you will be rewarded for your patience and I might be forgiven for the length of time I have held your attention.

Discussion

THE PRESIDENT, MR. E. GUY DAWBER, IN THE CHAIR.

Major HARRY BARNES [F], in proposing a vote of thanks, said: I rise with very great pleasure indeed to propose this vote of thanks, which is to be seconded by Mr. Nicholls, representing the National Federation of Building Trades Employers, and also by Mr. Coppock, who is representing the National Federation of Building Trades Operatives. So you are sure to get a very practical discussion at least from the two gentlemen who will follow me, if I myself am not able to contribute very much of a practical character.

I think Mr. Welch did very well in pointing out, at the beginning, the rather exceptional character of this paper, because I think very much of our thanks to him to-night lies in the fact that he has raised a question of this exceptional kind. Because here, where we mainly devote our attention to subjects of artistic and technical interest, we are plunged to-night into a subject which concerns itself not so much with the artistic and technical side of the building industry as with its human and economic relationships; and it is all to the good that a great Institute, in times like ours, should show that we are alive to the fact that there are factors in the building industry other than those which concern us as artists and craftsmen. I hope that a result of this paper will be what Mr. Welch is trying to bring about, that is a real co-ordination between architects, contractors and operatives, a feeling that building is one, and cannot be carried on in watertight compartments, cannot be carried on by any one of these three sections while ignoring the interests of any other. But we have gone to some degree in that direction for more than a year we have had in being a Joint Consultation Board upon which architects and builders sit, and which came into being at the invitation of the builders. I think no more gratifying tribute was ever paid to this Institute than the fact that this great section of the building industry—whose relations with us are not always of the most amicable character—should have come to us and said "Let us reason together." Perhaps a great

deal has not come out of that so far, but there are indications of some very interesting developments. The latest is that we have a joint application coming to us from both builders and operatives to discuss a matter of interest to us all, that is the question of time limits in contracts. That is only a little indication of the movement which Mr. Welch, in his paper, is trying to develop. I will close my reference to this by saying that we should welcome a similar approach by the building trade operatives with the suggestion that we should join with them on a Consultation Board on which architects would sit side by side with craftsmen to discuss their common interests. So much for the main object, which I am sure the paper has furthered.

And now just a word or two about the subject at large. One of the interesting features of this gathering is that you will listen, in a few moments, to two men who are dealing with this question from experience not merely gained in one area, but from an unusual experience gathered throughout the length and breadth of this realm, who see building carried on not only in London or Gloucester, or Bristol or any other part, but in every part of the country, and who therefore know something about the problem at large. Looking at it from that point of view, I sometimes wonder whether the problem is, in its essence, really soluble. The outstanding feature of it is the shortage of building labour. The bricklayer, the plasterer and the masons are not coming into the ranks as they used to come, relatively to the population at any given time, and it is thought that that may be remedied. I sometimes wonder whether it ever will; whether the truth is not that we in this country are really passing away from these more primitive, coarse, hard, arduous occupations, and tending to take up occupations which offer greater ease and more remuneration. I hope I am wrong, but the phenomenon we are seeing in the building industry is not confined to it. It is not confined to this country; there is a general tendency in every country, as civilization

advances, for the people to drop off the more disagreeable occupations, those which subject them to real hardship, and take up what everybody looks upon as occupations which are advanced. That is the history of the individual. Every individual is always trying to better himself, to leave coarse and disagreeable occupations in which he is ill-paid, and get in to something which will require shorter hours and in which he will get more money. That may be true also of the community, and what we are face to face with here may be a great tendency in the life of a nation in a high state of civilization which we shall not be able to combat. It may be that we shall have to look to other nations to carry on some of these coarser industries ; but that is as it may be.

Leaving that aspect and turning to the other question, that of output, on which stress has been laid in Mr. Welch's paper, attention is drawn to the fact—and it is drawn here and in other quarters—that the same output is not being got from the craftsman to-day, particularly the bricklayer, which was obtained in the past. It may be that that is another fact which we have to reckon with. After all, the kind of output which is being measured is the output of physical energy, and I think it may very well be that as nations grow in civilization they may desire to carry more of their physical energy into their leisure time than to expend it in the time devoted to what is called work ! That, again, is a phenomenon not confined to the building industry. It is very common in the coal industry for people to publish statistics to show that the weight of coal hewed by the hewer to-day is not within the weight which was hewed 30 years ago, by some 30 per cent. or even 40 per cent. What we are faced with here may be something which is inevitable in the march of progress ; that if we want to increase output we must not look to increase it by making an added call upon actual human physical energy, but we shall have to look for increases of output to improvements in mechanism. It may be that along those lines the solution that we are hoping for is to be found.

I pass on now to something a little more in detail, and with that I shall close. I have been very much struck by two sets of figures given by Mr. Welch. Speaking of the shortage of labour and the possibility of increasing it ; he spoke of it somewhat in the terms of its being a commodity, subject to the laws of supply and demand. I feel very certain that as long as labour is looked upon as a commodity and as subject to the laws of supply and demand we must look to everybody who controls that commodity to endeavour to restrict its supply. All who have a commodity to sell desire to restrict the supply of that commodity ; they want to come into the market with as little as they can bring, so that they can raise the price of the commodity. If the wages of labour are to be determined by applying the laws of supply and demand which govern commodities, I am sure there is no co-operation to be expected from those who have any influence in increasing the supply of labour. And I am bound to add that I think that would be only natural.

Figures have been given which, I think, call for some comment. We are given figures of the increase of wage obtained in the various crafts. If wages had been regulated during the last few years merely by the supply of labour,

we might have expected the wages of bricklayers and plasterers to be very much increased, compared with 1913, over those of painters and labourers, for the latter are admittedly in very much greater numbers than the bricklayers and plasterers. And yet the figure which Mr. Welch gives us shows that the painters, who are the most numerous of all the crafts and in whom there has been the least reduction in number, have received the highest rate of increase, some 127 per cent., I think, as against 87 per cent. for the bricklayers. There may be an explanation forthcoming—and it will be interesting to get it—why it is that, contrary to all the laws of supply and demand, the craft which has the largest number of men has been able to get the greatest increase in wage.

The last point I shall touch on is the attractiveness of the profession. Theorising is sometimes apt to play one strange tricks, but I was theorising that the falling off in bricklayers and plasterers was due to the fact that neither of them was an attractive trade, and that you would find a boy much more likely to be a carpenter and joiner than a bricklayer or a plasterer. Yet the figures show that the falling off in joiners and carpenters is as great as that of bricklayers and plasterers. I shall be glad to hear from Mr. Nicholls or Mr. Coppock some explanation of that point. Whether it is that the carpenters and joiners must march with the bricklayers and plasterers, and if you have a 24 per cent. drop in bricklayers you will get it also in carpenters, I do not know. I am curious to know how it is that a more attractive trade, carried on in much better conditions—without "wet time" and under shelter—has decreased to the same extent as the more exposed trades of bricklayer and plasterer.

It has been a very great pleasure to me to propose this vote of thanks to Mr. Welch.

Mr. W. H. NICHOLLS (Past-President of the National Federation of Building Trades Employers), in seconding the vote of thanks, said : running through Mr. Welch's paper there has appeared an earnest desire that the architectural profession may take a larger share in conducting, guiding and moulding the forces of the building industry than they have been able to take in the past. In the Cotswolds, where I come from and where we say the type of England's architecture is not excelled by any other in the country, you cannot stand in a church without feeling that there is a wonderful harmony in the work of building, both in its creative and directive force and the hand which put into operation what was directed by the brain. There has been a tendency in recent times to divorce the brain from the handicraft, and anything which will bring us back to a happy co-operation will be all to the good of the industry.

There is one point which it will be well to state at the outset, namely, that the building industry has always been a very self-contained industry as far as its government is concerned. The general public hear far more of our disagreements than of anything else, but I assure you that our agreements far outweigh and outnumber our disagreements. The improvements which we have worked together for the good of the industry have been very great, and, incidentally, not critically, may I take the strongest objection to the statement that has crept into Mr. Welch's paper—I do not know whether Mr. Welch meant it to

come in in quite the way it has. He says "The professional class, by virtue of the position it holds, is at once concerned with safeguarding the public interests." We, as representing the business side of the craft, consider that there is no need for anyone to be set over us to safeguard public interests. We shall always seek for the utmost co-operation, and that given, I am sure good will result to every one of us.

I am extremely grateful that Mr. Welch has touched on what must be of deep concern to every employer and every operative, because we, employers and operatives in the building industry, have long ago reached the point where neither of us is given control of the business side of the industry. The employer is only a servant, a servant to the community who brings him into being; and if the command of the community at one moment is X, and at another 5X, and at still another minus X, you can understand the difficulty the employer is in to maintain continuity of indentured labour. I think the best brains of decent people, who want life to be better for all, have been exercised in trying to find a remedy, but I do not think a solution has yet been found. The building industry is dragged down from its business side by competition. I do not want to be misunderstood about this. Competition to produce the best thing brings out what is best in a man and gives the best result. But competition in the business world produces the devil in a man. It encourages in him the desire to carry out the least he can. I say this with a knowledge of the industry and the competitive methods in various parts of the country. The successful business man, from this point of view, is the man who is able to give the least value in the competitive market for the money he receives. I cannot see any satisfactory way of conducting the building industry under our present methods of competition. Mr. Welch's paper gives us the opportunity of voicing some of our difficulties. It is generally the practice, in asking for competitive estimates, to ask 6, 8, 9 or even 10 builders who are on a general level of standing, and in addition one builder whose methods are entirely dissimilar. I am speaking of the experience of the trade generally. The Federation I represent only stands for federation so far as the observing of rules for guidance in the industry are concerned. The way in which a man carries out his business is no concern of ours. One point which must be borne in mind is the effect of legislation on the cost of industry, and if that is included in the "on costs" Mr. Welch's figures might be nearer the mark.

From the employers' point of view I can think of nothing but good coming from a tripartite movement which will assist the training of apprentices in the building industry. The best of employers in this country have been striving to educate their members to receive apprentices. From the operatives' side we have received only goodwill; it is only fair that I should pay tribute to that. We have far more difficulty in getting our employers to take apprentices than we have to get the goodwill of the operatives. All those who are really concerned with the future of the building industry cannot help being deeply concerned at the thought that the best brains of the country have been going into other industries. Why could not they come into ours? It may be that through our own narrow-mindedness we have not made the industry possible or

attractive to them. The question of the flat rate may have retarded men of ingenuity and originality from coming in. But any action that can be taken which will direct reasoned and careful thought to increasing the personnel of the building industry and bringing in the best brains will be for the benefit of us all. It will increase production, it will diminish cost, it will improve the class of craftsmanship, and, if such a thing could come about, it would create in operative, employer and architect a sense of community of interest instead of what is perhaps accentuated more than is necessary, division of interests because we do not understand one another.

I second with much pleasure the vote of thanks.

Mr. R. COPPOCK (General Secretary, National Federation of Building Trades Operatives): I want to support the motion before the meeting, but there are many things in the Paper that I want to criticise. I like the spirit which permeates the address. I am not going to deal with costs, as to what was the cost of work in 1914 in comparison with the cost now. What I have to say on that is that our people have more sense to-day than they had in 1914 or 1919. In former times their only education and recreation were very hard work, and they believe there is a certain amount of leisure which is due to the human body, as well as work. You will never get back to 1914, for in that year the position of building trades' operatives was even worse than that of the agricultural worker in this country. If you take the wage rate of 1914, in comparison with that of 1925, you are showing a state of affairs which was very mean. We were too cheap, and so were architects and builders as well as ourselves.

We, as operatives, are very pleased to be here this evening, and we would be very glad to have architects associated with us. We have always looked upon you in this Institute as somebody really superior, as standing on a pedestal, somebody not to be touched, giving your advice to the builders, and always your advice has been directed against us. When we have met the builders on the question of increased wages, they have said "The architects have said the cost of building is too much now, and we can't give you increased wages, because building clients are not making arrangements for work." We should like to meet you to know whether you do say these things or not. We have our doubts. We want different conditions from even those we are enjoying to-day. We are not going to say our builder friends have opposed us when we have been trying to get better conditions; they have done their best. We had the first national dispute for about a hundred years in 1924. We did not cause it; of course they were responsible for it, not us; we are peaceful people in the industry. But we believe they tried as far as was within their power and within their limited outlook. We are the most conservative industry in the nation; architects are very conservative, so are the builders, and so are the operatives. We do not appear to be able to get away from the old ideas and the old traditions, but we have got to do so if we are going to attract people to our industry, especially if, as Major Barnes said, there is a tendency for people to get away from the arduous jobs of life. There should be a desire to get our boys to realise that our industry is really a very noble one. I know that when I was learning my craft—

and I am one of those terrible bricklayers—I was very pleased indeed to be able to show my father what I had done, and I am very pleased now to go round and see some of the work I did when I was working—of course, I do not work now—I am a trade union official! If that sense of building something could be inculcated in our schools—and it is not—it would be good thing. In fact, in our technical schools the first thing that is told the boys is, “if you are very efficient you will become a foreman, or possibly a master builder.” It is sheer nonsense. That is one of the exceptions I take to the Paper. We take the trouble to train apprentices so that they shall be efficient, and then you take them in charge and produce from them foremen and employers of labour. It is workers we want. The employer only pays our wages, he does not produce. I assure you we are willing to co-operate in any apprenticeship scheme. We have argued with the employers' association and they have agreed that it can only be solved by the co-operation of operatives and employers. But they have a very difficult task with their rank and file, quite as difficult as we have with ours. There is so little difference that if you went to a meeting of the operatives and one of the employers and you were not told which was which you would not be able to distinguish between them. For instance, we have been talking on the question of wet time for five years, and we are still talking about it. We believe it is possible to overcome some of the difficulties which prevent the industry attracting men to itself, and as long as we talk we are all right. But immediately we do something and set it down on paper there is a terrible row. We go to committee after committee and meetings year in and year out, and immediately we do something the cat is among the pigeons. Recently we met in conference and agreed that certain things should be presented to a full committee on the contribution to be made for wet time to the operatives. And the most profound statements were then made—all on principle; of course, the smallest detail becomes a principle—and it was said this could not be done and that could not be done. The real principle at the back of it is that we want to avoid paying anything; that is the fundamental principle you have to face. You architects must help us on this question; there must be some continuous employment. My father, who is a bricklayer, 61 years of age, has earned two hours' wages in three weeks; he is staying the rest of the winter with me. I have been in the north addressing meetings this week, and building trades operatives have informed me that they have taken five shillings and sixpence home these last three weeks, and they have got to keep wife and children. Some operatives in a village I know have been on the Guardians for some time, Chester-le-Street, and that is a situation which is not very nice. It is a position which the industry has got to tackle. I know we shall put the cost on, but in comparison with many things which are being supplied in this life what we are putting up is very cheap, and it is durable. Look at the buildings we are erecting—I am not referring to the synthetic method of housing. I believe that the economic system has produced this buying in the cheapest market and selling in the dearest, and it is said it is wrong. If it is wrong with us, it is wrong on the part of the people who are controlling the industry of this country. There must be brought into industry more of

the human element. It is said we are the people who violate all your schedules. Contracts are given to the men who will do the work the cheapest. I have heard it said, when tenders are being considered, “We will give it to this chap; we know he can't do it at the price, so you must put an extra clerk of works on to watch him.” We want to participate in the industry; so far we have never done it. We have never been asked to have a voice in the management. We are told that is not our job; what we have to do is to get on with our work, lay the bricks, or saw that bit of timber, or do that bit of plastering. There was an effort made under the Industrial Council to bring us in, but we were shut out, and we had to go on our own. We are out to do the best we can for our people; to give them the best economic conditions they can have under the present conditions of society. We, as a Federation of Building Trades Operatives, believe in a flat rate of wages. We believe it is an accident what particular sphere a man may be working in, in the main, and we do not think there is any necessity for a differential rate of wages in consequence of a certain overplus of men in any industry. If that is the basis of the argument, it will be policy for us to restrict entry to our industry more and more. But we do not want to do that. We believe there are reasons why the painter should have the same rate of wages as the bricklayer. The bricklayer says he loses time in wet weather, the joiner says it costs him more for tools, the painter says he is working in white lead and as a result his life is not a long one, the plumber is the aristocrat of the industry and is entitled to his fee. There is really reason for every man having a flat rate. We want to co-operate with our builder friends, and we want the co-operation of the Royal Institute of British Architects. I want to say to Major Barnes that if it is necessary for us to approach you we shall be only too pleased; but the great difficulty is that we feel that the dice is loaded twice against us; we think many of you have the point of view of the building contractor, not the point of view of the building operative. We think you have not an unprejudiced mind when dealing with labour problems. We want to say to you that you are very inconsiderate to labour on many of your jobs; you are more concerned about your client than you are about the men who are working on the job. You often shut a job down without considering the people who are working on it and are getting their living out of it. There is a particular contract in a cellar; the work has been covered up, and the job has been stopped three weeks “for frost,” but there is no possibility of the frost getting near it. It is all right for the architect. You should not only use your brains in designing, you should also use them as far as manning the job is concerned. I do not think it would be possible for architects to participate on a wage board. As far as we are concerned, we should ourselves like to be the wage board, and I think we should be able to settle things very well.

I want to say to the lecturer this evening that we are opposed to payment by endeavour, a point he makes in his address. It is as unfair to our industry as is competition on the basis laid down by Mr. Nicholls. The pace is set by the young men, and the old men are chased out. It lays itself open to scamping of work; there is no industry which opens itself to that so much as the build-

ing industry, because you can put a nice skin in front of it, and people do not know what is inside it ; it is like a sausage. I realise that you men, who have been trained on the merit principle, cannot see our point of view. But there is a future for our industry, and I think we shall be able to attract youths to it. I do not think there can be any help from the absorption of labourers. While we agree with the Government that adults may be enlisted in our industry, we pledge our faith to the boys coming in at about 15 years of age, because we think they make the better craftsmen. They are not coming in to the plastering, and I do not know how we shall get them ; every effort has been made, both by operatives and employers, in that direction ; I do not think they will be attracted even if you pay them another 6d. an hour.

My Federation is only too delighted to be associated with the Royal Institute of British Architects and to meet the builders. We feel that in meeting the builders you have acted unfairly towards us, yet we are one of the important links. We would like to be on your councils and that you should understand our point of view. We are very simple men, dealing with a very difficult question, and we say that on the most important questions in the industry to-day the architects can give us some assistance ; then there would be no difficulty with the builders of this country. Have a scheme of payment for wet time, even a scheme of payment for holidays, for if there was a general understanding that would be possible.

I have to apologise for the absence of my President, who, as those in the Federation know, lives at Glasgow, and could not come. I want to tell you that the most important paper to read is *The Operative Builder*. If architects want to know about the building industry from our standpoint, that is the paper to read.

Mr. HENRY MATTHEWS (Past-President, National Federation of Building Trades Employers) : I do not think I can add anything useful to the discussion, but I consider it a great privilege to have been able to listen to this excellent paper. The matter is so full of difficulty that no one can set himself up as an authority and say "This is how it should be done," and so settle it. What we have to do is to educate one another, so that ultimately we shall come to conclusions that are more and more in unison. With the assistance of architects and the co-operation of our colleagues amongst the operatives there should be no difficulty in eventually arriving at a conclusion which will bring more peace into the industry than we are enjoying at the present time.

Mr. GEORGE HICKS (General Secretary, Amalgamated Union of Building Trade Workers) : I am very pleased to be here to listen to the excellent paper which has been given us by Mr. Welch. There is much in it which, had there been time, I would have liked to criticise, particularly the matter relative to the personnel of the industry, when he takes the figures back to 1921. Many things have happened since then. I think there can be no more eloquent justification of the need for architects to be associated with employers and operatives in the industry than what has happened since 1921.

I am particularly pleased by the reference to "wet time." No person feels happy if he realises that other people are unable to get the necessities of life. It is not only the mental anguish and anxiety they suffer, but also the physical suffering, and everyone desires to make a contribution to the unfortunate state of affairs which is represented by casual labour. But when in addition to the casual character of the work there is the question of wet time, how is a man to budget for his home ? A man with a wife and family cannot cater for them in such conditions. I appreciate much of the work which has been done by architects in endeavouring to arrest public attention in this matter. Those who have a full week every week cannot understand the economical harshness and the difficulties of accommodating life to these hardened circumstances. We can pass resolutions and cheer sentiments favouring the worker, but unless we are experiencing the physical handicaps we cannot feel about it sufficiently poignantly. I am hopeful that your reference to-night, sir, will mean that there will be a combination of all the brains in the industry to introduce, as has been said, more humanity into the industry. Then there would be more contentment.

With regard to the figures dealing with output, they appear to me to be not in accord with the general facts of the situation. I will give you the figures in bulk, and we can analyse them subsequently. The number of bricklayers we had in Great Britain in 1914 was 25,000 more than we had in 1924. The number of bricks which were produced and imported in 1914 was less than three thousand million. This year we produced and laid over five thousand million. We laid two thousand million more bricks in 1924 than in 1914, with 25,000 less men. None of us in the industry stand for indifference or laziness. We believe we pull our weight. But in addition we want the feeling that there is some sense of economic security. The fact of having to work faster to be unemployed soon lacks attraction. We regard our industry as being a very important one. I am not one of those who believe we are not attracting good men. We have good men, men who can take their places in the councils of the nation in any walk of life. And I am sure there is an improvement in architecture ; the buildings of to-day are pleasant compared with some of the shoddy work we have had in the past.

Mr. FRED THORNE (President, London Master Builders' Association) : I think this is the first time that builders and operatives have been called in conference with you on this most important subject, and we trust that it will not be the last.

In Mr. Welch's paper it is stated that there is an agreement that there shall be one apprentice to seven operatives. That, I assure you, is not the case. In London to-day we have an agreement that we can have one apprentice to four operatives. In the schemes for the housing of the working classes we can have one in three, and it is to be deprecated that this is not being taken up as ardently as was to be expected. We are hoping that when we get a little more peace from the little side troubles—wet time, early rising, going to bed late, and so on—we shall get down to work, and that there will be attracted into this noble profession of ours young lads who will be proud to do what their

fathers have done before them. It is true it is not attractive to ask a boy to be a bricklayer or a plasterer, and the main reason is that the technical schools are mainly interested in training boys for the joinery and carpentry crafts.

One's experience is that parents bring lads to offer them for this particular craft mainly owing to the lad concerned having been taught to this end; whereas, while there is plenty of room in the industry for bricklayers, plasterers, plumbers, it is with great difficulty one can persuade the parents to apprentice these lads to one of these crafts.

If, therefore, Public Authorities would extend to these crafts their help it would tend to alleviate the present shortage in these key trades.

Mr. JAMES MURREY (Secretary, London Regional Council, National Federation of Building Trades Operatives): It is often a disadvantage for a speaker to join in a discussion late in the evening, but on the subject of the building industry there may well be something left after others have spoken which is worth hearing.

I think Mr. Welch is considerably out in some of his figures. I think he said there were 60,000 masons short compared with 1914; but there were never 60,000 masons in the country. We had a very fine organisation of masons, and they did not number 30,000. That needs to be corrected, or else it will give a misleading view about the craft. As regards joiners, the unemployed insurance cards issued to carpenters and joiners now show that there are 20,000 more in the industry than in 1914, and insurance cards are a very reliable guide. When it comes to the question of apprentices, again I want to say that Mr. Welch is substantially out in his figures. There are, roughly, 30,000 building mechanics organised in London, and if the facilities for the training of apprentices were taken full advantage of by employers we should have 7,000 to 8,000 apprentices working in the trade in London alone. But I could not find 2,000. Who is to blame for that state of affairs? You are right in saying that the reservoir of labour which used to supply London—the provinces—is not now operative. But if this apprentice matter were fully dealt with, the shortage would soon disappear. I do my best, because my function is not only to negotiate with employers for 1d. an hour more, or something of that sort, but to improve the status of the industry we are engaged in. I try to work along those lines, and persuade my fellow members to do likewise. I sometimes wonder whether it is appreciated what a great change is taking place in our industry, and in others. There are no facilities now for the training of the all-round craftsman, as there used to be. We are getting very much specialised, and machinery is largely doing what formerly the craftsman was called upon to do. There is a factor which sometimes breaks the heart of a craftsman—you will excuse my mentioning it—the client and architect are frequently responsible for continual alterations on the job and nothing disgusts an operative more than doing a piece of work and having, two or three days afterwards, to pull it down again. When the job is finished and the cost got out, the comment is sometimes made: "The lazy beggars, look what this job has cost!" Many employers say, if we had payment by results or a premium bonus system in operation, many of their difficulties would disappear. If

you are going to pay a man in accordance with his output, you must have the organisation and the material to give him that output, and this would necessitate the reorganisation of practically the whole of the jobs in London. If there were this co-operation of architect, builder and operative, we should, in a short time, remove many of the difficulties. One of the principal difficulties is the shortage of skilled labour in certain trades. There are more apprentices on the subsidised housing schemes of London than has been mentioned by Mr. Welch; which shows that there is a desire to encourage the young boys to enter the industry. I want to make a point which is fatally missed by most employers, and that is, the direct personal touch of employers with their operatives and with the boys during their period of training. Often at the present day a boy does not know the name of the firm, but that a foreman is looking after him. I feel sure that the psychological effect is not appreciated of the employer having direct contact with his apprentices.

Mr. MAURICE E. WEBB [F.]: It is a very good thing we should meet together. What I am particularly interested in is wet weather time. I was lately a member of a group of architects who investigated the question. We asked trade union leaders to dine with us once a month to discuss the question of wet weather time, because we feel that it is a bad thing that men should be turned off the job if it rains or snows, or because the state of the weather prevents them from working. The discussions were all private and confidential, and we are not at liberty to mention names; but several of those who were so entertained are here to-night. You have all seen the occasion when the foreman has blown his whistle and 50 or 100 men have to leave their work and do not earn a halfpenny during the rest of the day. Most builders and trades union leaders tell us there is nothing costly in the payment for wet time, but that is, a week per man would be the outside figure. We went into it, and found that a contractor in Chelsea, Mr. Dixon, who has paid wet weather time to 100 men, puts the cost at 3d. per week per man, and the arrangement works satisfactorily between himself and the men. I feel that the master builders in London have been very stubborn over this wet weather business. I have longed many months for an opportunity to say this in public. All our sympathy lies with the men.

When you come to output, the question is different. Mr. Coppock says he does not believe in payment by results. But you can't have it both ways. When architects try to help the men to get wet weather time, perhaps they will help us to get payment by results. We want to see that when clients pay large amounts for a building, they get the proper amount of work for their money, and I think the workers are anxious to give them fair value. Perhaps Mr. Coppock will try? (Mr. Coppock: I must have notice of that question.) Probably we do not mean the same thing, and it is time we sat down and deliberately tried to understand each other's meaning. I hope there may be some triangular conference with this object in view.

The PRESIDENT: It is very late, and there is nothing that I can add to the most interesting paper and

illuminating discussion. I can only say, on behalf of the Institute, that we have been exceedingly glad to see to-night those we do not, I think, see often enough in this room, that is to say, the employers and the representatives of the operatives. If, as Mr. Webb says, we could meet together and discuss our problems—architect, builder and operative—I am sure we could make much better progress and we should be able to smooth out many of the difficulties. Many years ago—I do not like to say how many—I was a clerk of works, and for five years I was on buildings—two very large ones—every day. During those five years I learned what has been of inestimable value to me ever since. That was, that there was no better workman in the world than the British workman. The work he does, and did then, is, I am perfectly sure, excelled by none. I feel the force of what Mr. Hicks and Mr. Coppock said : if in any way we can make the workman's path smoother and help him to better times and better wages, we shall all be doing a very great work.

The vote of thanks was carried by acclamation.

Mr. WELCH, in reply : It is a clear indication to me that this paper has been well worth the doing, because, unless I am very much mistaken, I have seen here to-night some indication of a new spirit in the building industry. Speakers have voiced opinions leading in the direction I had hoped for. If those expressions are sincere—and I have no reason for thinking they are not—then the meeting will have the result of bringing nearer co-operation which many—if not all of us—feel to be essential between the various parties. I expected that my figures would be subjected to criticism by one party or other, and I therefore went to a great deal of trouble and research in connection with them. I have been perfectly amazed at the degree of variation in the authentic information available concerning the building industry.

With regard to the question raised as to the cost of a rod of brickwork. So far as my arithmetic is concerned, I can vouch for its accuracy, because I have had it checked and counter-checked and worked out by various people. The conclusions there arrived at are based upon figures supplied to me by two firms of quantity surveyors and three firms of builders, to whom I am much indebted for

help. Since, however, the figures supplied to me did not agree in any two cases I have had to make what I consider to be a fair computation. Two items, however, were consistent, viz., that the cost of materials had increased and that the actual time taken to build a rod of work had also considerably increased in comparison with 1914. The variations regarding the length of time now taken by bricklayers on their work were considerable and the figures quoted are averaged.

The figures I gave regarding the number of operatives in the industry, I also expected to be questioned. So far as my percentages of reductions are concerned, I can vouch for their accuracy, for I have had them checked. The sources from which I quoted were, in the one case, the number of craftsmen returned by the Census in 1901, 1911 and 1921. In the other case (Table 2) this was compiled by the Ministry of Labour in 1924, especially to serve the purpose of the Committee then set up by the Ministry to ascertain the labour available for the Government's housing schemes. I think I could get no better authority for my figures.

I have endeavoured to make the best deductions I could from these sources of information, and whatever the actual figures I think the percentages cannot be very badly out. If there is any general ignorance displayed in this paper regarding the industry, I feel sure it is shared largely by architects in general. It is not our fault, because hitherto we have not been given the opportunity of understanding the inner workings of the industry. If, however, you extend to us not a privilege but an opportunity to perform a duty which we, first as citizens and also as participants in a big industry, should have, then I think the degree of ignorance will from year to year diminish and all parties will be the better for a closer co-operation.

There are many other points I would wish to touch upon, but the hour is late. I must therefore conclude by expressing my warm thanks for the way in which you have received my paper and the kind things you have said about it, which I fear are not fully deserved. I wish also to acknowledge with thanks the assistance I have received from many sources in my search for information.



The Dome of the Rock in Jerusalem

BY WILLIAM HARVEY.

AS Consulting Architect to the Noble Sanctuary in Jerusalem, Mr. Ernest Tatham Richmond, F.R.I.B.A., writes authoritatively upon the principal building contained within this remarkable sacred enclosure. His sumptuous work* combines with the general interest of a description of the structure and decoration of the Dome of the Rock, the professional interest of a report upon proposed methods of repair and redecoration.

The subject is worthy of the painstaking investigation Mr. Richmond has bestowed upon it, not only as a wonderful example of polychromatic architecture, but as the expression of very real piety continued throughout several centuries.

Referring to the persistent attempts to maintain the building in a fit state to embody the sentiment of the holy place, Mr. Richmond rightly maintains in his preface that "The Dome of the Rock is, then, alive—almost in the same sense that a man is alive. It changes its tissues and it renews its structure in order to maintain power to enshrine the soul that is in it. It is much more than a place of archaeological or 'artistic' interest. It is of a living Faith, the living symbol, striving, by the strength of the Faith it represents, to survive in the face of many and great difficulties."

Now this statement is not only true from the point of view of the statistician cataloguing successive historical repairs and noting the care with which they have been executed, but it is also true to the impression one gathers by the happy process of living for any considerable period within the building. Those who know the Dome of the Rock best love it best, and find themselves most anxious that it shall continue to be the nobly beautiful creation that it has always been. The proposals of fanatics that the building should be demolished and its site given over to "a worthier shrine built perhaps to the honour of some other Faith," must be repugnant to all who have enjoyed the privilege of study beneath the dome, and they will agree with Mr. Richmond's plea for the judicious repair of its structure and decoration.

Just what treatment should be given in detail to each defective part is not so easy to determine. Many pages of the book are occupied by the description and illustration of the present state of the exterior tilework. Since the external coating of mosaic fell into decay and a new facing of tilework was given to the building after the Turkish conquest, the tiles themselves have decayed and been renewed and adapted at several different periods. Late repairs have been executed with tiles of indifferent or bad quality, or by means of patches of dingy grey Portland cement.

Such methods are obviously unworthy of the great building and good tiles should be prepared and used to replace the bad modern tiles, and to clothe the bare patches. Mr. Richmond has already taken steps to reintroduce the art of tile-making in Jerusalem, and, with the help of

* *The Dome of the Rock in Jerusalem*. By Ernest Tatham Richmond, F.R.I.B.A., Consulting Architect to the Noble Sanctuary in Jerusalem. Oxford, at the Clarendon Press, 1924.

Armenian tile-makers, has produced examples of a quality far superior to those used in recent repairs. Simultaneously he has discovered a few tiles of superb design still remaining upon the walls and others in the various minor buildings within the sacred enclosure.

From these he has produced drawings showing a conjectural restoration of an old design for the treatment of the exterior tilework as a consistent whole. The proposed method of applying new tiles, when these have been made, is indicated on page 75 of Mr. Richmond's book: ". . . the work below the cornice of the north-eastern, eastern, south-eastern and southern façades is in comparatively good condition. It needs little more than small repairs consisting in the replacement by new tiles of those no longer able to resist the weather. On the four other façades the tiles date mostly from 1874. Many of these have already lost both their glaze and their colour; most of them have been re-set on more than one occasion since that date, and their actual setting is not of a kind to promise a long life. . . . It is therefore desirable to renew the tile decoration of these four façades and of the parapet wall. On the drum the mosaic inscription needs repair where it has fallen or where it has been repaired with inferior tiles. The panels between the windows need completion with facsimiles of the old designs. The windows also need a good deal of repair, and the band below them needs practically complete renewal. About twenty-six thousand new tiles are needed. The cost of the work described would be about £E.8,000."

The opening chapter upon the structure of the building is well illustrated with photographs and diagrams among which a section is included with a superimposed fly-leaf to show, by means of a geometrical grid, the simple geometrical proportions of the setting out. I have already had occasion to mention some of the geometrical proportions of this building, and its curious irregularities in the JOURNAL R.I.B.A.† Mr. Richmond has come to very much the same conclusions, but has also discovered that the height of the dome and the height of the external octagon are related to the unit of measurement adopted for the breadth and height of the central drum. The height of the octagon is shown by the geometrical lines of the grid to be equal to 1.732 of the height of the main columns beneath the drum, and the heights to springing level of the drum windows and to the summit of the dome are also geometrically determined by means of lines inclined at 60° to the horizon.

Of the condition of the structure, Mr. Richmond is able to speak reassuringly. It is not in serious danger of failure, though small defects, such as leaks in the lead covering of the roofs, have affected the priceless colour decorations within.

Windows pierced in the outer dome of the central part of the building on the occasion of the German Emperor's visit are suspected by Mr. Richmond of having a pernicious effect upon the coloured and gilded plasterwork of the inner dome.

† R.I.B.A. JOURNAL, 19 September 1925, p. 614.

While a cushion of warm air existed between the domes the inner shell was protected from alternate expansion and contraction, and this insulating layer has been seriously impaired by the recently executed windows.

The splendid stained glass windows are also robbed of their proper effect by the contrasting glare of light which enters through these plain windows at a higher level. Their brilliancy, too, has been reduced by the accumulations of dirt upon their outer sides, and Mr. Richmond puts forward a satisfactory scheme for making them accessible for cleaning.

Of the many illustrations, several are colour diagrams representing individual tiles or groups of tiles, executed in one or other of six principal periods of redecoration. Two windows of the drum and a fragment of geometrical pavement are also illustrated in colour.

Mr. Richmond's painstaking drawings, from which these illustrations have been prepared, are valuable records of the patterns of the tiles, but his plea for the removal of recent tiling and its replacement with new might have been strengthened had some detail illustrations been added to show the varying quality of the enamels and glazes of the tiles of different periods. Some excellent photographs of the interior indicate the artistic

importance of the rough limestone rock in the midst of the highly ornamental shrine.

Strangely enough Mr. Richmond has not given prominence to the meaning of the Rock in relation to the whole building. The sacred Rock is identified with Arbaham's sacrifice, David's repentance, the altar of Solomon's temple and the scene of the Prophet's ascent to Heaven. The spot is considered as the point of earth most closely connected to that Happy Land and the lavish decorations upon the building are appropriately indicative of its fertility and felicity. Floral subjects, conventionalised in conformity with the ban on naturalistic representation, predominate on the exterior, and flowers, fruit, wings, and crowns, also conventionalised, are blended in the arabesques of mosaic inside the building.

In a chapter devoted to "Inscriptions on Tiles," Mr. Richmond gives, among others, a translation of the inscription over the Northern Entrance which mentions the entry of troops of the Faithful through the open gates of Paradise, but beyond stating that the North Door is "commonly known as the Gate of Paradise," he does not indicate in his book the importance of this idea in the composition of the magnificent building.

The Waterloo Bridge Debate at the L.C.C. 15 December

BY RONALD P. JONES [F.], L.C.C.

By the time this JOURNAL is issued the debate will have become a matter of history, but in view of the very inadequate reports in the Press it still seems desirable to place on record some fuller account of it, while the names of the 32 members who fought, spoke and voted to try and save the bridge should be published as a matter of justice.

The debate lasted for three hours and was very fully attended, but it was evident from the moment that Mr. Gatti began his speech for the amendment (to proceed with a new bridge) that the result was a foregone conclusion—not so much from anything that he said, but from the "mass tendency" which a member of the Council can feel by a sort of instinct. Mr. Gatti spoke for forty minutes with a deliberation which appeared to me intentional; he declined to recognise that the position had altered in any way since the decisions of February, and still pointed to the advice of the first two engineers consulted, as if it was valid against all subsequent opinions. He also reiterated the interpretation of the letter from the Council of the Institution of Civil Engineers, as if this document was an expression of technical opinion, although the letter itself stated that this was not the case. He devoted a considerable time to a technical point of the depth of foundations, in which the Council was quite unable to follow him, and which

was an excellent example of the kind of question which can only be decided by an expert tribunal. He also made a most important admission—that if it had been possible to provide four traffic lines on the present bridge he might have taken a different view of the matter, which implies that the bridge *could* be underpinned, and that the only consideration in his mind was the mere claim of traffic utility.

He entirely evaded (and evidently had not really considered) the crux of the traffic problem—what to do with the increased traffic when it gets to the Strand—and touched vaguely on the Subway scheme, of which a model exists at the County Hall, and which I maintain to be a complete fallacy, creating more difficulties than it solves; also on a bridge scheme over the Strand, which is open to exactly the same objections. Like all the speakers, he admits that the six lines which they demand are quite useless until the whole of the surroundings on each side of the bridge are rebuilt (including Aldwych, which is not yet finished!), and that all they now require is a four-line bridge.

The next four speakers each occupied the full time which the Standing Orders allow (15 minutes, and an extension of 10, informally conceded by the Council at the time), which I am told has not often happened in any debate of recent years. Lord Falmouth, in

seconding, spent some time on the Charing Cross project as the alternative, and claimed that the Charing Cross bridge was so unlikely to be removed that the scheme could not be calculated on within any reasonable time, overlooking the fact that it is already in a weak condition and the Southern Railway has to restrict its use seriously. He pointed to the risks of the process of underpinning, and described a recent collision which had taken place under one of the arches between two vessels, which would have led to serious loss of life if the underpinning operations had been in progress at the time.

Mr. Norman, in opening the case against the amendment, claimed that the Bridges Committee was consistent in its present recommendation, since they had always taken the line that *if* the bridge could safely be preserved it ought to be. He pointed out, in answer to the frequent argument that the Council ought to be able to decide its own affairs for itself, that it does habitually take expert advice on all kinds of technical points, as when the design of the County Hall itself was under consideration. Also that there have been many cases in recent years when the "claims of art" (as the Bridges Report expressed it) have been put above the "claims of utility," as, for instance, the steps of St. Martin's-in-the-Fields and the Whitgift Hospital at Croydon. Being himself admittedly the writer of the Bridges Report, he was able to repeat and underline many of its arguments, but although he is the most distinguished convert to our side I felt that he had hardly gone the whole way, and that too many traces of the old faith still clung to him! His influence with the Council is so great, and the effect of his conversion from the new-bridge policy so striking, that if he had been a little less impartial he would probably have won over many undecided voters.

Following him, I was able to claim the consideration shown for a maiden speech, having intentionally remained silent in the Council since my election in March, seeing that this debate would eventually take place. In the available time I believe I made use of all the possible arguments for preservation, both positive, on the value of the bridge and the possibility of saving it, and negative, on the fallacy of the idea that a wider bridge would really be of any use to the traffic problem. The fact that until 1923 no one had ever dreamed of suggesting that the bridge should be taken down; that it is now secure enough (except for the one weak pier) to have served as a platform on which to erect the steel girder span for the temporary bridge; that the conflict of engineering opinion, while quite natural, shows a heavy majority on the side of underpinning, which is not affected by the advice of the Council of the Civil Engineers; that while the "claims of art" are universally admitted, even by the "destroyers," the "claims of utility" are highly controversial, and even fallacious, as shown by the refusal

of Mr. Gatti to commit himself to any method of dealing with increased traffic at the Strand. This latter point also affects the question of cost, because it is admitted that underpinning must be in *some* degree more economical than any reconstruction, but it has not been noticed that the estimate for the new bridge has never included any estimate for the cost of a Strand subway or bridge, one of which is absolutely indispensable to the wider bridge scheme, and will therefore still further increase the total cost.

Mr. Morrison, the Labour Party leader, who followed, repeated his former argument that modern architects ought to be quite well able to produce as fine a design as Rennie did; he also offered a curious new argument—that it would be impossible to find an impartial expert tribunal, because all the available engineering talent had already been consulted or was connected with the Institution of Civil Engineers, which had declared itself against underpinning. He called on the Council to assert its own authority and make up its own mind, and so on.

Mr. Culpin, who had the advantage of being one of the deputation from the Architecture Club before he became a member of the Council last March, was able to deal with several of the points made in the two opening speeches, and stated that the risks of demolishing an existing bridge were even greater than those involved in underpinning it (which has probably not been recognised by the Council, which looks on "taking down" the bridge as a very simple operation), and suggested that whatever the possibilities of modern architecture might be, a new bridge would not have the historical associations of the present one.

By this time more than two hours had been spent, and the remaining speeches were comparatively short; Mr. J. D. Gilbert, one of the veterans on the Council, spoke on the navigation problem, and against preservation; Dr. Scott Lidgett on the traffic problem at the Strand and its obstacles to any wider bridge; Mr. Tasker, M.P., was partly inaudible, but I understood him to be deprecating the merits of the bridge as an architectural design—the only speaker in the whole debate who ventured to do so. Mr. Meinertzhagen, Chairman of the Improvements Committee, declared himself a convert to preservation; and Captain Swinton, in a few beautifully-phrased sentences, spoke what he called the "swan song" of the bridge. Referring to the frequent exhibitions in the lobbies of the Council Chamber of old prints or photographs of vanished London buildings, he said "we look at them and say, 'What a pity! Need they have been destroyed'?" In this way will our descendants look at the illustrations of Waterloo Bridge and say, "What a pity! Were they *quite* sure that it had to go?"

The division showed a majority of 50 for destruction—82 for, and 32 against. The size of the majority is surprising, and is partly due to the fact that the

Labour Party at the last moment insisted on making it a "party question," and claimed that its members should vote *en bloc* for the amendment. A few of them refused to do so and were absent from the division, while Mr. Culpin voted with us. The amendment was really carried by the 57 Municipal Reformers who voted for it.

Following the procedure of the Council, the amendment was put formally as a resolution and passed by consent, as there would be no point in immediately repeating the division upon it.

I can point with some satisfaction to the fact that the Progressive Party, to which I belong, though far too small to affect the result, showed a majority for preservation—five for and three against. The list of 32 members who voted against the amendment includes five past-Chairmen of the Council and the present Chairmen of the Housing Committee, Improvements Committee and Bridges Sub-Committee.

Municipal Reformers (26).—Sir F. Anderton, Miss Cazalet, Sir Cyril Cobb, M.P., Capt. C. E. Cobb, E. M. Dence, Mrs. Emmet, Lady Eve, T. C. Goff, H. C. Gooch, W. W. Grantham, K.C., H. J. Greenwood, M. Hays, Miss Hill, Mrs. Hopkins, Sir G. Hume, M.P., Col. Levita, T. Littlejohns, W. F. Marchant, E. L. Meinertzhausen, R. C. Norman, Sir L. Pound, Dr. Adeline Roberts, H. V. Rowe, Capt. Swinton, Admiral Taylor, Mrs. Worsthorne.

Progressives (5).—H. A. Baker, Percy Harris, M.P., W. C. Johnson, R. P. Jones, Rev. J. Scott Lidgett, D.D.
Labour.—E. G. Culpin.

The following letter from the President of the R.I.B.A. was published in *The Times* on 31 December:

SIR,—As President of the Royal Institute of British Architects I wish to place on record our deep regret at the decision of the London County Council to destroy Waterloo Bridge.

The Institute many months ago convened a conference of all the societies interested in the preservation of the bridge, and obtained professional engineering advice by which it was distinctly shown that it could be saved by underpinning, and at a later period urged that the matter in dispute should be referred to the First Commissioner of Works and that he should be asked to appoint an independent expert commission to report upon it.

Such a course was, indeed, advocated by the Bridges Sub-Committee of the London County Council, and, if adopted, would have satisfied that great body of public opinion which, as the correspondence in your columns indicates, is profoundly concerned at the threatened loss of one of our greatest national monuments.—I am, &c.,

E. GUY DAWBER.

The following letter by the Hon. Secretary R.I.B.A. was published in *The Times* on 4 January in reply to a plea by the Bishop of Woolwich for the consideration of the traffic problem in connection with the present bridge.

SIR,—The Bishop of Woolwich, in his letter to *The Times* of 28 December, appears to think that Waterloo Bridge can only be preserved at the cost of discomfort to the thousands who pass daily from one side of the river to the other.

Does he realise (1) that all the advocates of the preservation of Waterloo Bridge are keenly alive to the necessity for more adequate river crossings; (2) that it will cost little more to mend the present bridge than to pull it down; (3) that a new bridge in a better traffic position would in the long run cost little more than the rebuilding of the present bridge; and (4) that the congestion at the Strand crossing caused by a widened Waterloo Bridge would become intolerable?

This is not merely a question of aesthetics. The present bridge can be made safe for a thousand years. This, plus a new bridge in a better traffic position, would give, not six, but nine lines of traffic across the river, and would save the present guardians of the bridge from the possible stigma not only of vandalism, but also of waste of public funds.—Yours, &c.,

E. STANLEY HALL,

Hon. Secretary R.I.B.A.

* * * Since the decision of the L.C.C. a large number of letters have appeared in *The Times* expressing dissatisfaction with the decision and the hope that the bridge may yet be saved. Amongst these appear the names of Sir Frank Dicksee, P.R.A., Mr. Arthur Keen, Sir Wilfrid Stokes, Professor W. R. Lethaby, Professor Arthur M. Hind, Mr. C. J. Holmes, Sir William Bull, Professor Beresford Pite, Mr. C. H. Collins Baker, The Bishop of Southwark, F. L. Griggs, A.R.A., etc.

Correspondence

R.I.B.A. FORMS OF CONTRACT.

61, South Molton Street,

London, W.1.

14 December, 1925.

The Editor, JOURNAL, R.I.B.A.

DEAR SIR,—The R.I.B.A. forms of contract are very useful documents, but I venture to suggest that discrimination between the alternative agreements, with or without quantities forming part of the contract, would be made easier if, instead of a red slip attached to one of them, the agreement itself were in one case entirely printed in red.

It is not a great matter, but I have known cases where, the slip having become detached, the consequences were unfortunate, and the precaution seems so simple and obvious and so free from corresponding disadvantage that I think it worth suggesting.—Yours very truly,

EDMUND W. WIMPERIS [F.]

"INIGO JONES AS A COLLECTOR."

With reference to Mr. Keith's article *Inigo Jones as a Collector*, published in the last issue of the JOURNAL, in order that there shall be no mistake in the identification marks which appear on the drawings, the author would like the accompanying copies to be substituted for marks 1, 2, 3 and 5 printed at the foot of the first column of his paper on page 95.

150:H: 49:4: 54:H: 252:5:

These copies are a closer representation of the actual symbols used in marking the drawings.

The New Arterial Roads of Greater London

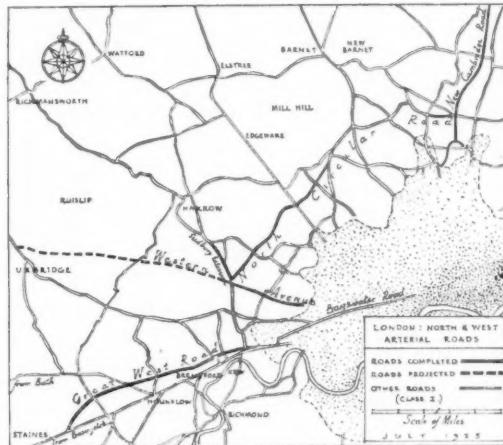
VISIT BY THE TOWN PLANNING AND ART COMMITTEES.

BY W. HARDING THOMPSON [A.]

In view of the importance of the new arterial roads to the plan and architectural character of London, it was considered advisable that the Town Planning and

criticisms and suggestions as might be of assistance in any future schemes.

The first tour of inspection was made on July 18th,



Art Committees should inspect and report on those roads already completed and now under construction. As the areas covered by these roads is so great, it has been arranged to take each district in turn and make such

1925, of all the new arterial roads in the north and north-west districts of the Metropolis, and the following notes have been made thereon. The area visited is indicated on the diagram here illustrated.

TOUR OF NEW ARTERIAL ROADS, NORTH-WEST AREA
OF LONDON, JULY 18TH, 1925.

The following new roads were visited:—

- (1) Western Avenue (including the Sudbury Extension).
- (2) Great West Road.
- (3) North Circular Road.
- (4) New Cambridge Road.

The object of the tour was to ascertain:—

- (a) The value of these roads as part of London's arterial system.
- (b) To what extent proper consideration had been given to the architectural treatment of road junctions, approaches and new bridges.
- (c) The suitability of road section, grading and surface.

THE WESTERN AVENUE.

(Length, 8 miles; total width, 120 ft.; carriage-way, 50 ft.)

This road is planned to extend from Bayswater westwards, through the exhibition grounds of the "White City," then parallel to and south of the Great Western Railway near Perivale, after which it will traverse open country until it joins the old London-Oxford Road, one and a half miles north-west of Uxbridge. Its function will therefore be to relieve the old Oxford Road of a large proportion of traffic going direct from the west

of London to the Chilterns and Oxford, and it will consequently reduce much of the existing congestion at Shepherd's Bush, Acton and North Ealing. This relief is not yet noticeable, because up to the present only short sections have been completed in Acton near the L.C.C. Housing Estate ; another section north of Hanger Hill is now under construction.

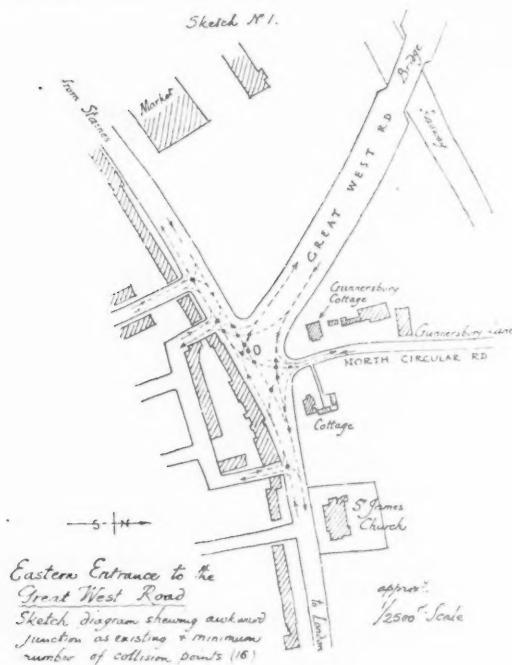
It is obvious that the Western Avenue will prove a valuable addition to London radial arteries; but it is suggested that careful consideration should be given to points where it crosses existing roads. One such point was noticed particularly, namely, immediately north of Hanger Hill, where the new road crosses the North Circular Road by the Great Western Railway. Here a small house of little value is allowed to obstruct the vision of motorists going south to Hanger Hill.

In Buckinghamshire, north of Uxbridge, it will probably be necessary to build three bridges to carry the new road over the rivers and canals; these should possess an architectural character worthy of a great approach road to the capital.

It is also very important that if the Western Avenue be connected with the Marylebone Road, great care should be taken with the articulation, so that it will have directness and dignity.

THE GREAT WEST ROAD.

This road, already completed, undoubtedly provides a much-needed alternative route to the very congested Brentford High Street. Traffic from London to the Bath Road can now avoid Brentford by this by-pass; similarly travellers to Staines and Basingstoke need not proceed through two congested points at Brentford, and Hounslow.

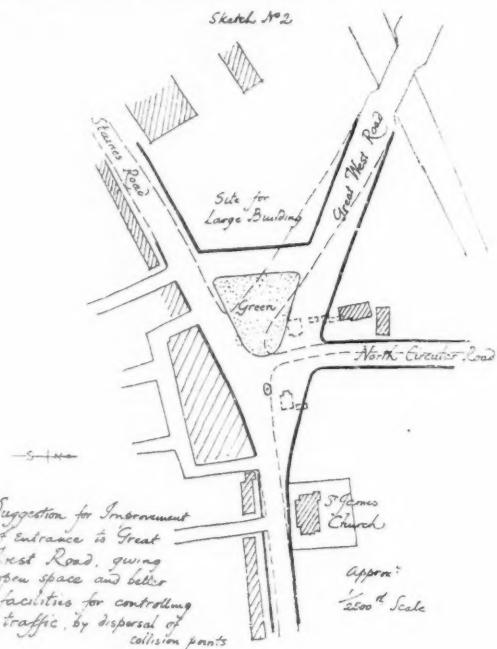


A just criticism can be made of the Great West Road regarding the very inadequate junctions at the eastern (Brentford) end, and also where it crosses the Bath Road. Particularly at the first-mentioned place, a splendid opportunity has been missed for designing a great traffic centre, which would not only be "foolproof" for the motorist, but of such a shape as to receive three very important arteries, as well as to minor streets.

After traversing open country as a dignified modern highway, the Great Western Avenue joins the old road in such an indecisive manner that motorists going west frequently keep to the old congested highway in preference to the new route. The diagrammatic sketch above shows the road junction as existing, with collision points indicated (assuming single lines of traffic in each direction). The second diagram shows a suggestion for a more architectural treatment by the sacrifice of only two cottages, one on each side of Gunnersbury Lane. The latter now forms part of the North Circular Road, and it is therefore of sufficient importance to justify a more architectural lay-out where it cuts the Great West Road.

THE NORTH CIRCULAR ROAD.

This is intended to provide a circumferential route north of the Metropolis through Essex and Middlesex and extending from the Thames Ferry at Woolwich in the east to Kew Bridge in the west. Considerable lengths of existing roads are utilised, such as East Ham High Street; Wadham Road, Walthamstow; Angel Road and Silver Street, Edmonton; Hanger Lane, Ealing, and Gunnersbury Lane, Brentford.

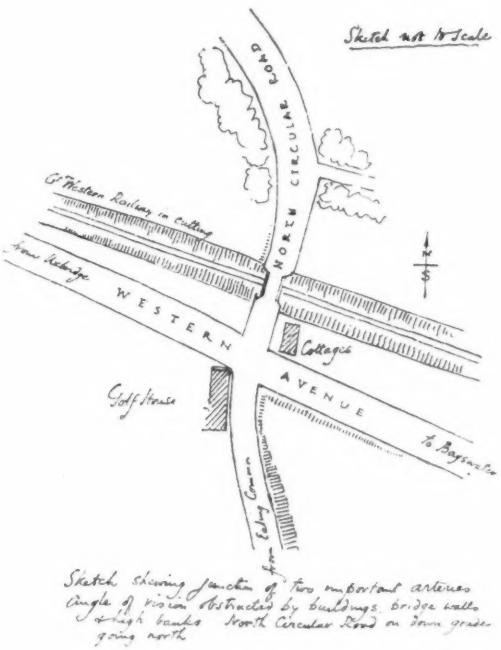


The sections inspected comprised the western half of this road, i.e. from Chiswick (where it intersects the Staines Road at the eastern end of the Great West Road) as far as the new Cambridge Road. The work in this section has been carried out by the Middlesex County Council, and the completed portions have a width between fences of 100 ft., a single 24 ft. concrete carriageway, with space left for the subsequent formation of a second carriageway, two gravel footways and wide verges between the carriageways and also between the footways and carriageways.

The most interesting section, consisting of an entirely new road, follows the Brent Valley on an admirable line south of Brent Reservoir, cutting the Edgware Road near "The Old Welsh Harp" and so proceeding north-west on an existing road of increased width. Great possibilities for an attractive development are inherent along the shores of the reservoir, and it is suggested that the lake frontage between the new road and the water should be kept open at all costs. Already a factory has been quite recently erected where the North Circular Road

crosses the Edgware Road, which is an unfortunate location for industries in view of the fact that the high ground on the 200 ft. contour offers such a splendid site for residential development north of Dollis Hill.

East of Welsh Harp the North Circular Road follows the valley of the Mutten Brook to the Finchley Road, where this junction is capable of improvement, and farther north, near "Tally Ho Corner," a sense of direction is lost owing to the difficulty in finding the road



for Friern Barnet and Edmonton. It is suggested that before reaching the New Cambridge Road, where the North Circular route runs parallel to Pymmes Brook, an attempt should be made to reserve the land between the road and brook for the public. This is one of the few points where this road might acquire the character of a parkway.

THE NEW CAMBRIDGE ROAD.

This route gives considerable relief to the old highway to Cambridge. Here again a small public garden or green might have been contrived at the junction with the North Circular and other roads, where there is a somewhat unimaginative lay-out.

CONCLUSIONS.

There appears to be a tendency to design new arterial roads rather as railroads were planned in the nineteenth century, as tracks for high-speed vehicles, yet without most of the safeguards provided by the railway companies at crossings. If the new motor roads are to be used for pleasure as well as business, it is suggested

(a) that a national system of signs should be established for road crossings to warn the by-road users that they are approaching a main road.

(b) That when the new roads pass through "Town Planning Schemes," powers given under the Act should be exercised to control the architectural character of buildings fronting on to these roads.

(c) That skilled architectural advice should be employed in the design of "traffic centres," bridges and viaducts.

(d) That funds should be reserved for tree planting on carefully selected sections.

(e) That when roads pass through open country and semi-rural districts, the road section should be designed in sympathy with the surroundings. Large granite curbs enclosing green verges, iron railings and crude bridges of concrete, do not possess a character suitable for a rural environment. In cases where roads pass through urban areas the design and general layout should have a more formal and dignified character.

(f) That in order to avoid monotony and at the same time to provide recreation grounds easily accessible, a series of roadside spaces should be preserved, either as "common lands" or fenced in for organised games. (The "Playing Fields Association" might co-operate in this respect.)

(g) That the road surface should generally be the most suitable for motor traffic, but that at points where the gradient is unavoidably steep, provision should be made at the side for a rougher surface necessary for horse-drawn vehicles.

(h) That trams should only be permitted in suburban areas, and wherever possible should run on sleepers in a separate grass track, with definite halting-places.

(i) Finally, these Committees consider that, in designing important arterial roads, care should be taken with the planning of branch roads, so that full use can be made of the trunk roads by the surrounding congested and inaccessible areas.

Leonard Aloysius Scott Stokes, President R.I.B.A., 1910-1912

Two Personal Reminiscences

(1) BY WALTER J. N. MILLARD [F.]

It falls to the lot of an old friend of nearly fifty years' standing to put together a few words in reminiscence of a fellow student in architecture, Leonard Stokes. To repeat an already told story, our first encounter was in "the late 'seventies," at the Architectural Association, where, as chairman for the evening of the Class of Design I could not help noticing how the proceedings were enlivened by the frank criticism of designs lying on the table, freely offered—with all due respect to the chair—by a slim, fair-haired youth of bright and engaging appearance. Having ascertained his name, I kept it in mind; so, when, some twelve months later, my master, Mr. Street, called me to him and told me that Mr. Leonard Stokes would be entering the office in a few days' time, I was not completely in the dark as to our prospective comrade, though I did inquire of the office downstairs, "Who's Leonard Stokes?" His coming was felt in the office as a gentle breeze, so to speak; yet his breeziness was by no means of the swelled-head variety. Before long Stokes and I found ourselves working alongside one another not only in the office but also outside, in the Architectural School of the Royal Academy and elsewhere; but we drilled apart as volunteers in different rifle corps. Then we sailed forth on our travels together, at home and abroad; went sketching, as we termed it. With Stokes in an office or a school, at a conclave of choice spirits, or on an outing, dull moments were rare. Were it merely a discussion, he would provoke that! So, too, would he be one to raise the laugh. During his boyhood, I was told, he had been anything but robust. With maturity strength and high spirits seemed to have come, and there developed a personality that made its impression wherever he went. A remark made to me in those young days by one old enough to be a grandfather to Stokes, after meeting him for the first time, was, "What a bright intelligent fellow! It's a real pleasure to have a talk with such a man." Book knowledge and class-room learning of architecture were not much in Leonard Stokes's line; and I sometimes think how fortunate it was perhaps that, coming just when he did, he missed both compulsory examination and our up-to-date courses of education in the profession. During his youthful days he would have been a rebel, I fear, against both, had they then been in force. As it fell out, he contrived to pick up his knowledge of things needful as he went along, from architect's office to quantity surveyor's office, and then from clerk of works-ship back to architect's office and academy school, observing keenly all the time how others set about their work and brought it to conclusion. He was a *bona fide* student, who meant business, and did want to learn—not merely to be told something. Though hardly to be described as deeply read in architectural lore, even as young architects went in those days, he was wide awake to most things that mattered; and furthermore he seemed rarely to be far out in his measure of men. He had a way of seeing through one. I have never known him to be moved, by fine writing or talk, to take up whole-

heartedly with unsound projects, put forward, though they might be, by the very best meaning of honest enthusiasts. In the sketching of building forms he would give his mind to worrying out on paper the make of a thing rather than to producing a picture of it fair to look at; and I doubt whether his own handiwork in a sketch ever, of itself, afforded him particular satisfaction. As a rule, his drawing was done not for the pleasure of it, or for show, but for practical purposes; either for his own enlightenment as a student of building work or by way of instruction to others in the carrying out of his intentions. At times, in fact, Stokes's outdoor sketching was accompanied by no little tribulation, especially to begin with. Whilst at work in company with others the cry from him might be heard—"Oh! I can't sketch, I shall give up the *Perfession*." But we knew better. He was not one to give up or give in. Certainly he was not altogether a docile learner. Unfeelingly we would laugh and concentrate our energies on tackling own immediate difficulties, knowing that in his case time would work a cure. In effect, a little wholesome neglect acted on Stokes as a tonic. This was illustrated when, in the summer of 1879, we set to work together on making measured drawings of the wall arcing in the Lady Chapel at Ely, a piece of work of some intricacy. I was the first to tire of our joint undertaking. With what Stokes regarded as shameless expedition I got through as much of the measuring and taking of full-size details as I cared for and then went on to indulge in the making of a tinted sketch of the work in perspective, leaving him to get along as he could, single-handed. Whereupon he reproached me, not unjustly perhaps, with some bitterness, for leaving him in the lurch; nevertheless he doggedly stuck to his job, and in the end turned out, as it were in very spite, a set of drawings that must have largely influenced the Prizes Committee of the R.I.B.A. in awarding him the Pugin Studentship of the following year. Few men perhaps have recognised their own limitations better than Stokes, with his liberal endowment of sheer good nature and strong undercurrent of common sense. One marked characteristic of him was the quality of fortitude, by which he was nerved to face difficulties and responsibilities that came early in his career. His uncompromising fearlessness and unconventional habit of mind constituted him no respecter of persons, especially of "big-wigs" or "brass-hats" if headgear only had to be considered; whilst, in the case of what might strike him as deficiency in intelligence on the part of others, he would scarcely be accounted to have won the crown for suffering gladly. His bright and adventurous spirit primed him with self-reliance and courage to face work ahead, come what might. Bright as he could be, at all sorts of times, he could also go to the other extreme. Then, for the moment, the sky became gloomy indeed, but soon the clouds were dispersed by the inner force of a strong will under control.

Leonard Stokes was not one to be slow in responding to

what he believed to be a call of duty. In 1882 he was with me in Florence when, without previous warning, I think, the summons came for his immediate return to England, in order to take up his first commission as a practising architect, viz., a new church, to be built in a provincial city. He started for home that evening, apparently without much eagerness at the prospect, but clearly resolved to rise to the occasion as best he could. Years afterwards I

(2) BY GEORGE

I understand Mr. Millard is writing to you about Mr. Stokes's young days as an architect and I am sure Mr. Stokes would have desired no one other. May I add a few words, my claim being based on having seen almost as much as anyone of him since the early days of this century, being lucky enough to go to him as a pupil and receiving during my pupilage very kind attention. To the pupil: every day one criticism, often more than one, in what were for him very busy days; no idleness allowed, strict attention to work, either in the office or outside, visiting work or sketching and measuring. Times that were often exciting, the small daily worries of an office not easily overcome by a temperament such as his. Hot as his temper was, the cooler moments came soon afterwards and the mutual forgiveness. One always felt that he was out for the best, that he did not mean half he said; one could not help but admire his keenness and quickness, the tremendous care he took with his work and the eagerness with which he hurried

heard him say, in public, that he, like too many of us, had the misfortune to begin independent practice years too early—ten years, I fancy he put it at. Even so, he never turned back. Practice kept coming to him and he did not fail to stand the test. He "made good." By and by, the time came when we saw that he had been found out for what he was, and presently, by general consent, he took his rightful position as a leader amongst us.

DRYSDALE [F.]

to his board on entering the office. It is hardly for me to write here of the quality of his work. I might quote from the words of one who knows on seeing the exhibition of photographs and drawings at the R.I.B.A. on the occasion of the presentation of the gold medal. These were to the effect that the most remarkable thing about the work was its continuity. From start to finish, the effort of an original mind working out its own problems in its own way. Or again, the words of a former Lord Mayor of London: "The most remarkable thing about Mr. Stokes is his extraordinary care of the smallest detail."

Since the war pain has been constant with him. He hardly complained, generally joking of his growing incapacity of movement. His limbs refused to act, he had difficulty even in speaking. Yet he insisted, until a fortnight before the end, on coming twice a week to the office, to the last determined to carry on.

His pluck was enormous and his patience wonderful.

Leonard Aloysius Scott Stokes was the son of Scott Nasmyth Stokes, Inspector of Schools, and the brother of two men both of whom have become eminent, Sir Wilfrid Stokes, K.B.E., the engineer, and Mr. Adrian Stokes, R.A., the painter. The training which he received was much more severely practical than that of most of the men who have distinguished themselves on the artistic side of their profession, and must have been of great advantage to him in his everyday work. Coming to London in 1871, he was articled to S. J. Nicholl, in whose office he remained for three years, going from there to the office of James Gandy, a quantity surveyor. After this useful experience he gained further practical knowledge by acting as clerk of the works to G. E. Street, who was at that time restoring Christ Church Cathedral in Dublin, which has been described as "one of the most careful of Street's 'restorations' and one of the best examples of nineteenth century Gothic." He worked later under Collcutt and under Messrs. Bodley and Garner.

As he was a member of a Roman Catholic family and had experience of ecclesiastical work under such famous men as Street and Bodley, it is not surprising that much of his work was for Roman Catholic communities. Among his ecclesiastical work may be mentioned All Saints' Convent, near St. Albans; an extensive new wing to Ascot Priory; a convent at Lynton for the Poor Clares; and the Church of St. Clare, at Sefton Park, Liverpool; the chancel of the Sacred Heart at Exeter, his earliest

work, carried out in conjunction with Ware, of Exeter; and Roman Catholic churches at Folkestone, Maidenhead, Southampton, Peterborough and Sudbury. He was also the architect of the Roman Catholic Cathedral at Georgetown, Demarara. One of the finest of his designs was one made in 1892, for a church at Miles Platting, a suburb of Manchester.

Of a different order was his work for the National Telephone Company, for which he built a number of exchanges, not only in the provinces, at Reading, Southampton and many other places, but also in London, at Paddington, Dalston, and, in 1908, in Gerrard Street. He was also the architect for Chelsea Town Hall. At Cambridge he was responsible for the new quadrangle at Emmanuel College; at Oxford he built, for the School Board, the Central Girls' School; at Lincoln, the Grammar School; and near Bath additions to Downside College. For Lord Digby he built Minterne House, Dorset, and he also designed Shooters' Hill House at Pangbourne. He was also one of the architects selected to compete for the abortive Holborn-Strand Improvement Scheme, an attempt to provide the new Kingsway and Aldwych with some uniformity of façade.

In 1889 he became President of the Architectural Association, and took part in establishing the evening classes there. He gained, in 1880, the Pugin Studentship. For the years 1910-12 he was President of the Royal Institute of British Architects, and in 1919 received the distinction of the Royal Gold Medal for Architecture; he

also received a silver medal for architecture at the Paris Exhibition of 1900. He was appointed in 1908 a member of the Royal Commission on Historical Monuments (England), and was a member of the Committee for the King Edward Memorial. He married, in 1898, Edith, daughter of Mr. W. E. L. Gaine, for many years general manager of the National Telephone Company, and leaves two sons and two daughters. Mrs. Stokes was made C.B.E. for her work in the war.—*Extract from The Times.*

MEMORIAL SERVICE.

A Requiem Mass was sung at the Servite Church, Fulham Road, on the 30th December, Fr. Moore being the celebrant. The principal mourners included:—Mrs. Stokes (widow), Mr. Adrian Stokes (son) and Mrs. Stokes, Mr. David Stokes, Mrs. Gaine, Mr. and Mrs. Gordon, Mr. and Mrs. Hawkings, Major Stokes, the Misses Stokes, and Mr. H. F. Scott Stokes. Among others who attended the service were:—Mr. E. Guy Dawber (President of the R.I.B.A.), Mr. Arthur Keen (Vice-President of the R.I.B.A.), Sir George and Lady Frampton, Sir John and Lady Burnet, Sir Brumwell Thomas, Mr. R. F. Dodd Clarke, Mr. and Mrs. S. Jacomb Hood, Mr. Dowling, Mr. J. Dowling, the Misses Harvey, Mr. Julius Olsson, R.A., Mr. Hubert Hull, Mr. Drysdale, Mr. N. Morrison, Mr. E. P. Warren, Mr. Campbell Jones, Mrs. Stanton Coit, Mr. and Mrs. Frank Green, Mrs. Alec Wally, Mr. D. B. Niven, Mr. Francis Hooper, Mr. William Woodward, Mr. John B. Lofting, Mr. Bartlett, Colonel Strange, Mr. T. Marhew, Mr. and Mrs. Charles Evans, Mr. and Mrs. Harry Lewis, Mrs. Bendix, Mr. Steinberg, Mrs. Charles Anderson, Mr. McAlister (secretary R.I.B.A.), Captain and Mrs. O'Connor, Mr. S. R. Pirrie, Dr. Schidrowitz, Mr. Wimperis, Mrs. Wickwar, Mr. A. W. S. Cross, Mr. and Miss Laing, Mrs. Edgar Lambart, Mr. Julian Lambart, Mr. George H. Duckworth (representing the Royal Commission on Historical Monuments), Mr. Roskill, K.C., Mrs. Roskill, Mr. Ashton W. Roskill, and Mr. and Mrs. Harry R. Lewis.

The burial took place at Mortlake.

ANNUAL COMPETITION OF INDUSTRIAL DESIGNS.

The Royal Society of Arts have issued the conditions of the third annual competition of industrial designs which will take place in June 1926. It will be open to two classes, (a) all British subjects (with certain specified limitations as to age) in the Section of Architectural Decoration, etc., and (b) British students in British Schools of Art.

The competition will be divided under the following heads:—

- (1) Architectural Decoration.
- (2) Textiles.
- (3) Furniture.
- (4) Book Production.
- (5) Pottery and Glass.
- (6) Miscellaneous.

The conditions of the competitions can be obtained from the Secretary of the Royal Society for the Encouragement of Arts, Manufactures and Commerce, John Street, Adelphi, London, W.C.2.

ARTS AND CRAFTS EXHIBITION.

The Arts and Crafts Exhibition Society, carrying out its policy of holding one show every three years, will open its 13th Exhibition on 16 January in the galleries of the Royal Academy. In the past the Society has been the means of showing to the public crafts newly revived or newly rescued from the degradation of the worse forms of commercialism into which the industrial revolutions and other causes had plunged them. The Society's early exhibitions laid before the public the beginning of the revival of modern printing, which was originated by William Morris, acting on the advice of Mr. Emery Walker. Cobden-Sanderson, who took up bookbinding when it was an artistically lifeless commercial proposition and left it a noble and flourishing craft, was first introduced to the public at the Society's exhibitions; Mr. Edward Johnston, too, with the revival of calligraphy. In the present exhibition two crafts will be seen which have been recently added to those dealt with by creative and productive methods as distinct from those of commercial reproduction in bulk: the illustration of books by engravings, and the printing of textiles. For too many years these have both been regarded as a field in which an artist's studio design on paper should be mechanically reproduced, without the intervention of craftsmanship in actual material.

The principle that design is not merely conditioned by material, but is inherent in it; that material is not passive, but has latent powers which it should be the object of the craftsman to discover and release into action is now no longer new. The Arts and Crafts movement is to a certain extent hindered by its own success. The less-well-advised manufacturers try to imitate in quantity production the external qualities of hand-made objects. A sham deckle edge on a machine-made paper is a humble but familiar example. Others try to find novelty and safety by what might be called photographically exact reproduction of hand-made articles. The best informed manufacturers and designers have formed societies, such as the Design and Industries Association and the British Institute of Industrial Art, to set bulk production on sounder bases and ideals.

But the movement has more insidious enemies than those of thoughtless manufacture. The most dangerous is slovenly hand-work, done under the impression that slovenliness brings out the quality of the hand as distinct from the machine.

The Society has no longer to fight to establish a new principle; it has a far more difficult and less exciting task: it has to see that principles almost generally accepted are intelligently understood and acted upon. It has to establish higher standards of achievement, and to clear the ground of the confused undergrowth which has sprung up under the shadow of its successes.

We hope to give a criticism of this year's exhibition in the next number of the JOURNAL, but owing to limitations of space much good work has unfortunately been crowded. In the meanwhile the following information may be of interest. The craftsman, originally known to us as a maker and master of puppets, has followed up his success of last exhibition with some remarkable wood, lacquered wood, and stone groups of animals.

The very high standard attained by modern typography is shown by exhibits from the two highest sources, as well as from other presses. Although Keighley Town Council has not been able to lend its War Book, that masterpiece of Mr. Edward Johnston's writing, the work of many scribes, including a well-known group, shows what is done to-day. Some examples of everyday handwriting show that even this, in the hands of the scrupulous, can be an act of graciousness. Engraved illustrations and printed textiles have been mentioned above as an almost new element in these exhibitions. Furniture, silversmithing, jewellery and stained glass are all said to be well up to the average of previous shows. Since the last exhibition the Society has lost two of its early members, Mr. A. C. Benson and Mr. Christopher Whall, the former of whom was the actual initiator of the Society. Examples of their work will be shown.

N.R.

Obituary

C. A. DAUBNEY [F.]

We deeply regret to report the death of Mr. Charles Archibald Daubney, which occurred on 14 December 1925 at the comparatively early age of 56.

Mr. Daubney was elected an Associate of the R.I.B.A. in 1901 and a Fellow in 1921. He was also a Fellow of the Surveyors' Institution.

After spending 15 years with an eminent London architect he was for about ten years in the architect's department of the London County Council, where he was engaged in connection with the provision of means of escape from buildings. Whilst there he was awarded in 1902 by the R.I.B.A. a Godwin Bursary, which enabled him to visit America and study the methods of providing escapes from commercial buildings in that country.*

He was appointed district surveyor for Rotherhithe from 1 January 1911, an appointment which he exchanged for the district surveyorship of the adjoining district of Bermondsey on 6 April 1915. This district was enlarged to embrace the whole borough of Bermondsey as from 1 October 1920.

He was Honorary Secretary to the London Building Acts Committee of the Royal Institute of British Architects, which was constituted to consider the "Reform of the London Building Law," and in that capacity he attended a Conference in October 1923 of architects and master builders which had been arranged to consider and report on what amendments should be made to the London Building Acts. He was a valuable member of the District Surveyors' Association.

His many activities included a period of service with the Y.M.C.A. in a military camp in 1916 and he gave valuable assistance in the work of the Congregational Church at Torridon Road, Catford, with which he had been associated for many years and where his artistic abilities were exhibited in the painting of the choir windows.

The funeral service at the church was attended by seven of his brother district surveyors, whilst the staff of the architect's department of the Council was represented by some of his former colleagues, amongst whom he was held in high esteem.

* See R.I.B.A. JOURNAL, Vol. 10, 3rd series, pp. 55-72.

PROGRESS OF TOWN PLANNING SCHEMES.

The JOURNAL has published from time to time information supplied by the Ministry of Health regarding the progress of Town Planning Schemes in various parts of the country.

A comprehensive statement has now been received from the Ministry of Health in which a complete list of local authorities engaged in the preparation of Town Planning Schemes is given, together with the stage reached in each case on 30 November 1925. The statement deals with England and Wales only, and will be supplemented monthly by the Ministry as alterations and additions to the list occur.

As space does not permit of the publication of the comprehensive list, the latter document has been placed in the Library at the request of the Town Planning Committee of the R.I.B.A. Members who desire information as to the progress of any particular Scheme should communicate with the Secretary R.I.B.A.

WAGES SLIPS ON TENDERS.

The Architects' and Builders' Consultation Board are desirous of ascertaining whether the Wages Slip (now affixed by contractors to tenders so as to provide for adjustment in the event of a rise or fall in wages) has had any detrimental effect upon the placing of building contracts during the past two years.

Members whose experience has led them to form any definite conclusions on the subject are requested to communicate with the Secretary R.I.B.A. as soon as possible.

THE SPECIAL EXAMINATION

TO QUALIFY FOR CANDIDATURE AS ASSOCIATE R.I.B.A.
(For applicants exempted by permission of the Council from Registration as Probationer and from the Intermediate Examination, and from submitting Testimonies of Study.)

The Council of the Royal Institute desire to call attention to an alteration which has now been made in the conditions for admission to the above examination upon the advice of the Board of Architectural Education.

Up to the present this examination has been open to architects in practice not less than 25 years of age and to chief assistants not less than 30 years of age, in accordance with the particulars stated on the official application form.

Upon the recommendation of the Board of Architectural Education, the special examination will in future be open, upon the conditions stated above, to architects in practice not less than 25 years of age and to all assistants over 30 years of age, whose applications are approved by the Board of Architectural Education.

R.I.B.A. ALLIED SOCIETIES' CONFERENCES.

The Royal Architectural Institute of Canada has appointed Mr. Septimus Warwick, F.R.I.B.A., to attend the meetings of the R.I.B.A. Allied Societies' Conference as the London representative of the Royal Architectural Institute of Canada.

NOTES FROM THE MINUTES OF COUNCIL
14 December 1925.

ARCHITECTURAL EDUCATION.

On the recommendation of the Board of Architectural Education the following steps were taken:—

(a) *Reconstitution of the Board.*—The following were appointed Members of the Board:—

Fellows.

Mr. A. J. Davis.	Mr. H. V. Lanchester.
Mr. W. Curtis Green, A.R.A.	Mr. T. R. Milburn.
Mr. Francis Jones.	Sir Giles Gilbert Scott,
Mr. Arthur Keen.	R.A.
Mr. S. D. Kitson, F.S.A.	Mr. Walter Tapper.
Mr. A. J. Taylor.	

Associates.

Professor L. B. Budden.	Mr. H. Chalton Bradshaw.
Mr. Michael Waterhouse.	

Representatives of Schools exempted from the R.I.B.A. Intermediate Examination.

Mr. T. P. Bennett, Northern Polytechnic.

Mr. George Drysdale, Birmingham School of Architecture.

Mr. G. D. Gordon Hake, Bristol School of Architecture.
Mr. W. S. Purchon, The Technical College, Cardiff.

(b) *Intermediate Examination.*—A Bronze Medal and a sum of £5 in books will be awarded for the best set of drawings submitted at the annual exhibition of Designs of Students exempted from the R.I.B.A. Intermediate Examination.

(c) *Probationership.*—In view of the fact that the Council have decided that except in very special cases a Headmaster's Certificate shall not be accepted after 1 October 1927, and no one shall be registered as a Probationer unless that person has passed one of the recognised examinations in the required subjects, all Members of the R.I.B.A. will be circularised and informed as to the standard required for the Probationership of the R.I.B.A.

(d) *Special Examination.*—The regulations governing admission to the Special Examination are to be amended so as to permit all assistants of 30 whose applications are approved by the Board to take the Examination.

(e) *Town Planning.*—A paper on "Outline of the History and Practice of Town Planning" is to be included in the R.I.B.A. Final Examination as an alternative to the paper on Advanced Steel Construction (B2) or Hygiene (C).

(f) *R.I.B.A. (Anderson and Webb) Scholarship (£70) at Cambridge University School of Architecture.*—The following scholarship award is approved:—

First Year Scholarship (£35), Richard Frederick Henniker (Trinity Hall).

Second Year Scholarship (£35), Christopher David George Nicolson (Jesus College).

(g) *Studentship.*—Sixteen Probationers were elected Students of the R.I.B.A.

UNIVERSITY OF LONDON.

Mr. Arthur Keen and Mr. Maurice Webb have been appointed representatives of the R.I.B.A. on the University of London Architectural Education Committee for the 12 months beginning 1 March 1926.

RIVERSIDE AMENITIES, TWICKENHAM.

On the recommendation of the Town Planning and Housing Committee, letters were addressed to the Authorities of Twickenham, Richmond, and the Royal Botanical Gardens and the Thames Valley Joint Town Planning Committee, expressing concern at the threatened disfigurement of the riverside lands adjoining Richmond Bridge on the Middlesex side by the erection of factories.

FOUNDLING HOSPITAL ESTATE.

In response to an invitation from the London Society, Mr. D. Barclay Niven [F.] has been appointed to represent the R.I.B.A. on a Joint Committee which has been established to assist in saving the Foundling Hospital Building (or such portions of it as it may seem reasonably possible to preserve) together with Mecklenburgh and Brunswick Squares.

ARCHAEOLOGICAL CONGRESS IN PALESTINE AND SYRIA.

Mr. Frank Moars, Vice-President of the Edinburgh Architectural Association, has been appointed as R.I.B.A. delegate to this Congress which will be held under the patronage of the British and French High Commissioners from 2 to 23 April, 1926.

L.C.C. DRAINAGE BYE-LAWS.

On the recommendation of the Science Standing Committee the attention of the L.C.C. (who are now engaged in revising the Bye-laws dealing with drainage, etc., comprised in the Metropolis Management Act, 1855, and the Public Health (London) Act, 1891, etc.) has been directed to the Science Standing Committee's Report of 1914. The L.C.C. have also been invited to receive a Memorandum and deputation on this matter.

SALARIED PUBLIC APPOINTMENTS.

On the recommendation of the Practice Standing Committee a notice has been authorised for publication in the JOURNAL advising members not to apply for salaried public appointments unless the salary offered is stated in the announcement inviting applications. The Association of Architects, Surveyors and Technical Assistants have been invited to act on similar lines.

REINSTATEMENT.

The following members were reinstated:—

As Associates : G. A. Gale, F. E. Collington.

As Licentiate : William Davidson.

A.B.S. SCHEME OF INSURANCE.

The A.B.S. specialises in Life Assurance. In Whole Life Assurance the sum assured and bonus are payable at death and the payment of premiums normally continues throughout life. The bonuses which are usually payable with the sum assured may be surrendered for cash, applied to the reduction of future premiums or used to reduce the period over which premiums are payable. The Society is not tied to any insurance office and is prepared to offer and advise upon a wide choice of policies in leading companies. Half the initial commission is returned to the assured in the form of rebate and the other half forms a direct contribution to the Society's funds.

Please address all enquiries to the Secretary, Architects' Benevolent Society, 9 Conduit Street, W.1. Telephone: Mayfair 434.

Notices

THE SIXTH GENERAL MEETING.

The sixth General Meeting (Ordinary) of the Session 1925-6 will be held on Monday, 18 January 1926, at 8 p.m., for the following purposes:—

To read the Minutes of the General Meeting (Ordinary) held on 4 January 1926; formally to admit members attending for the first time since their election or transfer; to announce the names of candidates nominated by the Council for election to the various classes of membership; to read the Council's Deed of Award of Prizes and Studentships, 1926.

Mr. H. S. Goodhart-Rendel [F.] to read a criticism on the designs and drawings submitted for the Prizes and Studentships.

R.I.B.A. REGISTRATION COMMITTEE.

Members are reminded that the meetings of the Registration Committee are being held at No. 28 Bedford Square, W.C.1, and that all communications for the Committee should be sent to Mr. C. McArthur Butler, Secretary to the Registration Committee, at that address.

ROOMS FOR ARBITRATIONS, ETC.

Convenient rooms for arbitrations, etc., are now available for hire at No. 28 Bedford Square, W.C.1, at a fee of £2 2s. per day. All enquiries with regard to vacant dates, etc., should be addressed to Mr. C. McArthur Butler at that address.

VISITS TO BUILDINGS.

A visit has been arranged by the Art Standing Committee to take place on Saturday 23 January 1926, to the Second Church of Christ Scientist, Bayswater, and the Armenian Church, Kensington. Members desirous of taking part are requested to make early application to the Secretary R.I.B.A., 9 Conduit Street, London, W.1.

ANNUAL SUBSCRIPTIONS.

Members' subscriptions, students' and subscribers' contributions became due on 1 January 1926. The amounts are as follows:—

Fellows	£5 5 0
Associates	£3 3 0
Licentiates	£3 3 0
Students	£1 1 0
Subscribers	£1 1 0

LICENTIATES AND THE FELLOWSHIP.

The attention of Licentiates is called to the provisions of Section IV, clause 4 (b) and (cii), of the Supplemental Charter of 1925. Licentiates who are eligible and desirous of transferring to the Fellowship can obtain full particulars on application to the Secretary R.I.B.A., stating the clause under which they propose to apply for nomination.

THE EXAMINATIONS.

INTERMEDIATE.

The Intermediate Examination, qualifying for candidature as Student R.I.B.A., was held in London from 20 to 26 November, and in Leeds from 20 to 25 November.

Of the 53 candidates who presented themselves, 32 passed and 21 were relegated. The successful candidates are as follows, the names being given in order of merit as placed by the Examiners:—

THEWLIS : EDWARD CHARLES [P. 1922], "Canonsleigh," The Cliffs, Southend-on-Sea.
 BRIGHT : GEORGE EDWARD [P. 1924], "Heathcote," Station Road, Westcliff-on-Sea, Essex.
 WRIGHT : GERALD RYBY HALL [P. 1922], 7 Willow Grove, Beverley, East Yorks.
 ALEXANDER : ANDREW GORDON [P. 1923], Y.M.C.A., Tottenham Court Road, W.C.1.
 CHEESMAN : KENNETH [P. 1925], 151 Palmerston Road, N.22.
 BROWN : CYRIL CLEMENT [P. 1922], 15 Ashfield Terrace East, Newcastle-upon-Tyne.
 SHORT : HAROLD [P. 1923], 53 Cowick Street, St. Thomas, Exeter.
 BEDINGFIELD : ERIC EDWARD [P. 1922], 1 Endsleigh Street, W.C.1.
 BOLTON : JOSEPH (Jun.) [P. 1919], Beaumont, Heaton, Bolton, Lancs.
 CLAY : RALPH HENRY [P. 1920], Endcliffe, Esplanade, Hornsea, East Yorks.
 CLOKE : SAMUEL DOUGLAS NEIGHBOUR [P. 1922], 19 Whiteford Road, Mannamead, Plymouth.
 COOPER : REGINALD WILLIAM GAZE [P. 1924], "Wilstead," College Street, Long Eaton.
 EDWARDS : DONALD THOMAS [P. 1924], St. Dunstan's, Amer-sham Hill, High Wycombe.
 FARMER : GEOFFREY JOHN [P. 1922], 1 Roland Houses, South Kensington, S.W.7.
 FRY : FRANCIS STEPHEN [P. 1923], 39 Walliscote Road, Weston-super-Mare.
 GRIGG : LESLIE ARNOLD [P. 1922], 64 Queen's Road, Norwich.
 GUY : RODERICK NELSON [P. 1924], "Dalkeith," 128 Crescent Road, South Woodford, Essex.
 HOBBS : ATHOL JOSEPH [P. 1925], 48 Lancaster Park, Hill Rise, Richmond, Surrey.
 HORNER : HUGH BALDWYNNE [P. 1921], 31 Constantine Road, Hampstead, N.W.3.
 KEMP : WILLIAM CHARLES [P. 1922], 2a Portnall Road, Harrow Road, Paddington, W.9.
 MILLINGTON : CYRIL RICHARD [P. 1923], c/o Maxwell House, 11 Arundel Street, Strand, W.C.2.
 MOWBRAY : WILLIAM BAWDEN [P. 1924], High Croft, Christ-church Park, Sutton, Surrey.
 NEIL : CHARLES WARREN [P. 1922], "Langley," 14 Valkyrie Road, Westcliff-on-Sea.
 REDDING : CYRIL NORMAN MERIDEN [P. 1920], Wormley, Broxbourne, Herts.
 ROWLES : DOUGLAS LAWRENCE [P. 1923], Trondia, Beltinge, Herne Bay.
 SCAMMELL : RODNEY QUINTON [P. 1922], 706 Coventry Road, Small Heath, Birmingham.
 SMITH : WILLIAM WILFRID [P. 1922], 107 Buxton Road, Heaviley, Stockport.
 TOZER : CECIL REGINALD [P. 1921], 4 Broadyates Road, S.W.18.
 UNSWORTH : HERBERT [P. 1924], 17 Gordon Avenue, Bolton, Lancs.
 VARLEY : HERBERT [P. 1921], Bramleigh, Blacko, near Nelson, Lancs.
 WARDLE : LIONEL TALLENTYRE [P. 1924], 9 Long Reach, West Horsley, Surrey.
 WATT : JOHN [P. 1925], Education Office, East Church Street, Buckie, Banffshire.

FINAL AND SPECIAL.

The Final and Special Examinations, qualifying for candidature as Associate R.I.B.A., were held in London from 2 to 10 December.

Of the 74 candidates admitted (seven of whom took Part I only and one Part II only), 34 passed (four in Part I only and one in Part II only) and the remaining 40 were relegated.

The successful candidates are as follows:—

BLIZZARD : HENRY GEORGE [*Special*], 8 Elmwood, Welwyn Garden City, Herts.
 BURTON : JOHN [*Special*], 71 West Parade, Mount Pleasant, Stoke-on-Trent.
 CASTELLINO : SYLVESTER JOSEPH TRINITY [*Special*], 23 Cloncurry Street, Fulham, S.W.6.
 COOMBES : ROBERT EDWIN MONTAGU [S. 1923], Cathedral School, Llandaff, Cardiff.
 COOPER : WILLIAM REGINALD ROYDON [*Special*], 17 New Street, Shrewsbury.
 DANN : CLIFFORD HORACE [S. 1923], 66 Trinity Street, Norwich.
 DOYLE : STANLEY HODGSON [*Special*], Calverley Chambers, Victoria Square, Leeds.
 GRAY : CHARLES CLARE [S. 1922], 81 Sutton Crescent, Walsall.
 GREEN : CHRISTOPHER [S. 1925], 83 Gunterstone Road, Baron's Court, W.14.
 GREEN : RALSTON TILSLEY [S. 1922], 11 Dents Road, Wandsworth Common, S.W.11.
 HARLEY : THOMAS [S. 1924], 17 Doughty Street, W.C.1.
 KEMP : CECIL GEORGE [*Special*], Messrs. Lander and Kemp, Bridge Road, Welwyn Garden City.
 KIMBER : CHARLES FRANK [*Special*], 39 Head Street, Colchester, Essex.
 LIPSON : SAMUEL [S. 1925], c/o James Miller, Esq., 15 Blythswood Square, Glasgow.
 LORD : WILFRID TURNER [S. 1924], 18 Park Hill, Ealing, W.5.
 MCKEwan : ARTHUR MALCOLM [S. 1922], 27 Somerset Road, Handsworth Wood, Birmingham.
 MESSENT : CLAUD JOHN WILSON [S. 1920], 34 Mile End Road, Norwich.
 *MONTAGU : ADRIAN ALBERT VAN, c/o Messrs. Simpson and Ayrton, 3 Verulam Buildings, Gray's Inn, W.C.2.
 MOORE : JOHN ROBERT [*Special*], 13 Acland Road, Willesden Green, N.W.2.
 PALMER : PHILIP EVANS [*Special*], 25 Royal Avenue, Chelsea, S.W.3.
 PARAMOR : FRANK WILLIAM [S. 1917], "Hillsborough," Selsdon Village, Sanderstead, Surrey.
 PASHEN : JOHN HERBERT [*Special*], Ujiji, Mount Pleasant, Dorchester Road, Weymouth.
 ROWSE : ERIC ANTHONY AMBROSE [*Special*], Flat 4, St. Stephen's House, St. Stephen's Square, Bayswater, W.
 SIMPSON : DOUGLAS JAMES [S. 1922], 51 Downs Park West, Bristol.
 VINE : RONALD OWEN [S. 1922], 7 Whymark Avenue, Wood Green, N.22.
 WATSON : EDWIN [S. 1921], 86 Orchard Road, Erdington, Birmingham.
 WILDE : GEORGE [S. 1922], 56 Arkwright Street, Bolton.
 WILFORD : CHARLES EDMUND [*Special*], 56 Deepdale, Leicester.
 WINTER : PERCY HAROLD [*Special*], 25 Pollards Wood Road, S.W.16.
 DAY : NUGENT FRANCIS CACHEMAILLE [S. 1919—Part I only], 61 Grove End House, St. John's Wood Road, N.W.8.
 KEMP : FRANCIS HENRY NORBROOK CREW [*Special*—Part I only], 15 Vernon Road, Hornsey, N.8.
 NASH : EDWARD TINDAL ELWIN [S. 1925—Part I only], The Cedars, Cranford, near Hounslow.
 SPINK : JOHN WILLIAM [*Special*—Part I only], Clarence Chambers, Kingston-on-Thames.

* This candidate is not a British subject, but has taken the Examination for the purpose of obtaining a certificate to that effect.

REMNANT : EUSTACE ARCHIBALD [*Special*—Part II only], 82 Cecil Avenue, Wembley, Middlesex.

THE SPECIAL EXAMINATION IN DESIGN FOR FORMER MEMBERS OF THE SOCIETY OF ARCHITECTS TO QUALIFY FOR THE ASSOCIATESHIP.

The Special Examination in Design for former members of the Society of Architects to qualify for the Associateship was held in London from 2 to 7 December.

15 candidates were admitted and all passed. Their names are as follows:—

DURY : ALAN BUXTON, 5 Copthall Buildings, Copthall Avenue, E.C.1.
 EVANS : BENJAMIN EDWARD, Rhosmaen, Queen Victoria Road, Llanelli.
 GODBER : ALBERT EDWARD, c/o Senior Works and Buildings Officer, Halton Camp, Bucks.
 JENKINS : FREDERICK URIAH, c/o Sir Aston Webb, R.A., and Son, 19 Queen Anne's Gate, S.W.1.
 JUNIPER : FREDERICK, 67 Havelock Street, Aylesbury, Bucks.
 MOULDING : LEWIS GEORGE, 107 Broadwater Road, Tottenham, N.17.
 PASCOE : HERBERT, 5 Scholemoor Avenue, Lidget Green Bradford, Yorks.
 PHAYRE : HAROLD, 29 Coton Crescent, Shrewsbury.
 PRICE : WILLIAM JOSEPH, 14 Brent Way, Church End, Finchley, N.3.
 ROBSON : ROBERT DAVID, County Architect's Department, Kingsbury Square, Aylesbury, Bucks.
 ROWE : HAROLD BERTRAM, "Ruskin," Brynhyfryd Avenue, Newport, Mon.
 SIMPSON : ISAAC ALEXANDER, "Cotta," 12 Mossigel Avenue, Ainsdale, Southport.
 SMITH : HARRY WILLIAM, 27 George Street, Oxford.
 TAYLOR : CAPTAIN FREDERICK JOHN, 69 Rue Verte, Rouen, France.
 TUTTON : ALWYNE, 50 Wrotham Road, Gravesend, Kent.

EXAMINATION IN PROFESSIONAL PRACTICE FOR STUDENTS OF RECOGNISED SCHOOLS EXEMPTED FROM THE FINAL EXAMINATION.

14 candidates were admitted to this Examination, which was held on 8 and 10 December and all passed.

Their names are as follows:—

ALABASTER : JOHN RICHARD (University of London).
 BRADDOCK : HENRY (Architectural Association).
 CURRIE : MURDOCH (Glasgow School of Architecture).
 LLEWELLYN-MORGAN : GUY LESLIE (University of London).
 MCCONNEL : KENNETH HAMLYN (University of Sydney).
 MARTIN-SMITH : DONALD FRANK (Architectural Association).
 MORRIS : ALEXANDER GEORGE (Architectural Association).
 MOSLEY : EDNA (Architectural Association).
 PATER : PURUSHOTTAM MUKUND (University of London).
 PHILLIPS : HERBERT GORDON (University of Liverpool).
 POUSHKINE : BARBARA (University of London).
 RITCHIE : THOMAS (Architectural Association).
 THOMAS : BRYAN WILLIAM RYLANDS (Technical College, Cardiff).
 WELSH : OLIVER MARTIN (University of London).

Competitions

ENLARGEMENT OF WISBECH TOWN HALL.

The President of the Royal Institute of British Architects has nominated Mr. W. H. Ansell, F.R.I.B.A., as Assessor in this competition.

BLACKPOOL MEMORIAL CLOCK TOWER.

The Corporation of Blackpool invite competitive designs for a Clock Tower with drinking fountain, to be erected in the new park. Assessor, Mr. E. Bertram Kirby, O.B.E. [F.] Designs to be sent in not later than Saturday, 13 February 1926. Conditions may be obtained from The Town Clerk, Town Hall, Blackpool, by depositing £1 1s., which will be returnable if a *bona fide* design has been submitted.

MANCHESTER TOWN HALL EXTENSION.

The President of the Royal Institute of British Architects has appointed Mr. T. R. Milburn, F.R.I.B.A., Mr. Robert Atkinson, F.R.I.B.A., and Mr. Ralph Knott, F.R.I.B.A., to act as a Jury of Assessors in connection with this competition.

**PROPOSED NEW PARISH CHURCH,
NEWBRIDGE, MONMOUTHSHIRE.**

The Competitions Committee desire to call the attention of members to the fact that the conditions of the above competition are not in accordance with the regulations of the R.I.B.A. The Competitions Committee are in negotiation with the promoters in the hope of securing an amendment. In the meantime members are advised to take no part in the competition.

**COMPETITION FOR LARGER OFFICES.
WEST BROMWICH PERMANENT BENEFIT BUILDING
SOCIETY**

The President of the Royal Institute of British Architects has nominated Mr. W. Alexander Harvey, F.R.I.B.A., as assessor in this competition.

TOPSHAM PUBLIC HALL COMPETITION.

Premiums of £50, £40 and £30 respectively are offered in the above competition. Assessor, Mr. Walter Cave [F.] Last day for questions, 1 January 1926. Designs to be sent in by 1 April 1926. Conditions may be obtained from the Clerk to the Parish Council, Topsham, by depositing £1 1s.

**BIRKENHEAD NEW ART GALLERY
COMPETITION.**

Proposed new Art Gallery and Museum, Birkenhead. Premiums offered £250, £175 and £100 respectively. Assessor, Sir Robert Lorimer, A.R.A., R.S.A. [F.]. Competition restricted to competitors practising as architects and being resident, or having an office within twenty miles of the Birkenhead Town Hall for the twelve months at least prior to 1 January 1924. Conditions may be obtained from E. W. Tame, Town Clerk, Birkenhead, by depositing £2 2s.

INTERNATIONAL COMPETITION.

The Fédération Internationale du Bâtiment et des Travaux Publics are organising an International Competition with a view to promoting and facilitating the construction of houses for the middle classes and intellectual workers. Prizes to the value of 500 dollars, 300 dollars and 200 dollars are being offered by Mr. Willard Reed Messenger, engineer, of New York, for a memorandum, either in English or French, not exceeding 5,000 words, accompanied by sketches. Particulars of the competition have been deposited with the Secretary R.I.B.A. and can be obtained on application to him at No. 9 Conduit Street, London, W.

**RECONSTRUCTION OF THE MOSQUE OF
AMROU COMPETITION, CAIRO.**

Members of the Royal Institute who are considering taking part in the above competition are strongly recommended to consult the Secretary R.I.B.A. before deciding to compete.

LEAGUE OF NATIONS.**COMPETITION FOR THE SELECTION OF A PLAN WITH A
VIEW TO THE CONSTRUCTION OF A CONFERENCE HALL
FOR THE LEAGUE OF NATIONS AT GENEVA.**

The League of Nations will shortly hold a competition for the selection of a plan with a view to the construction of a Conference Hall at Geneva. The competition will be open to architects who are nationals of States Members of the League of Nations.

An International Jury consisting of well-known architects will examine the plans submitted and decide their order of merit.

A sum of 100,000 Swiss francs will be placed at the disposal of the Jury to be divided among the architects submitting the best plans.

A programme of the competition when ready will be despatched from Geneva, and Governments and competitors will receive their copies at the same time. Copies for distant countries will be despatched first.

The British Government will receive a certain number of free copies. These will be deposited at the Royal Institute of British Architects, and application should be made to the Secretary, R.I.B.A., 9 Conduit Street, W.1, by intending competitors.

Single copies can be procured direct from The Secretary-General of the League of Nations at Geneva, for the sum of 20 Swiss francs, payable in advance, but will not be forwarded until after the Government copies have been despatched.

On the nomination of the President of the Royal Institute, Sir John Burnet, A.R.A., has been appointed as the British representative on the Jury of Assessors.

**PROPOSED NEW COLLEGE BUILDINGS.
LIVERPOOL COLLEGE.**

Proposed new College Buildings to be erected on a site in Queen's Drive, Mossley Hill, Liverpool. Assessor, Sir Giles Gilbert Scott, R.A. Premiums £500, £300 and £200 are offered. Last day for questions, 30 September 1925. Conditions may be obtained by depositing £2 2s. Designs to be sent in not later than 1 January 1926.

AUSTRALIAN WAR MEMORIAL—CANBERRA.

Competitive designs are invited for the Australian War Memorial at Canberra.

The competition is open to architects of Australian birth, wherever located, and in order that competitors who are abroad may be placed on the same footing as those in Australia, the conditions governing the competition will not be available in Australia until 15 August, at which date they will be available at the office of the High Commissioner, Australia House, Strand.

To ensure that the same working time is allowed to all competitors, the competition will close simultaneously in Australia and London on 31 March 1926, up to noon,

on which date designs from architects in Europe will be received at the office of the High Commissioner in London.

Intending competitors should communicate with the Official Secretary to the Commonwealth of Australia, Australia House, Strand, W.C.2.

PROPOSED BRANCH LIBRARY FOR GABALFA.

Proposed branch library to be built on a site in St. Athan Road, Gabalfa. Assessor, Mr. Sidney K. Greenslade [F.]. Premiums, £75, £50 and £30 are offered. Last day for questions, 7 December 1925. Designs to be sent in not later than 12 noon on 16 January 1926. The competition is limited to properly qualified architects within the City of Cardiff. Conditions may be obtained from Harry Farr, Librarian, Central Library, Cardiff, by depositing £2 2s.

Members' Column

APPOINTMENT VACANT.

An old-established firm of Architects in Manchester has an opening for a young Associate desirous of commencing practice.—Apply Box No. 6126, c/o The Secretary, R.I.B.A., 9 Conduit Street, London, W.1.

CHANGES OF ADDRESS.

MR. PERCY V. BURNETT begs to notify that he has removed his offices from 94 Jermyn Street to 107, Jermyn Street, St. James's, S.W.1. The telephone number remains the same.

MR. CECIL JACOB EPRILE begs to notify you that he has removed his offices from 94 Jermyn Street to 107 Jermyn Street, St. James's, S.W.1. The telephone number remains the same.

MR. E. BERRY WEBBER, A.R.I.B.A., has changed his office address to 2 New Square, Lincoln's Inn, W.C.2. (Telephone, Central 5052.) His private address is now 2 Chepstow Place, W.2.

MR. R. LANGTON COLE [F.]

MR. R. LANGTON COLE [F.] has retired from the Stock Exchange as from 31 December. All correspondence relating to the premises of the Exchange should in future be addressed to Mr. G. I. Buckingham, Surveyor of Works, at 23 Throgmorton Street, E.C.2. Mr. Langton Cole has opened an office at Abbey House, Westminster, S.W.1. (Telephone, Victoria 6678.)

ROOM TO LET.

ASSOCIATE has single room to let on third floor, within two minutes of Piccadilly Circus, at a moderate rental, including all usual services.—Apply Box No. 3025, c/o Secretary, R.I.B.A., 9 Conduit Street, W.1.

ACCOMMODATION OFFERED.

ARCHITECT with good offices in W.C. District offers part use of good room with telephone extension, for small rent and part time help. Electric light, heat and general service of clerk included.—Reply Box No. 3136, c/o Secretary, R.I.B.A., 9 Conduit Street, W.1.

OFFICE REQUIRED.

SMALL private office required, £30 to £35 p.a., inclusive, W.C. or S.W. district. Full particulars to Box No. 2126, c/o The Secretary R.I.B.A., 9 Conduit Street, W.1.

PRACTICE WANTED.

WELL experienced London A.R.I.B.A. would like to purchase a small share of live practice with senior contemplating retirement in due course. Substantial capital available. Apply Box No. 1126, c/o The Secretary, R.I.B.A., 9 Conduit Street, London, W.1.

Minutes V

SESSION 1925-1926

At the Fifth General Meeting (Ordinary) of the Session 1925-26, held on Monday, 4 January 1926, Mr. E. Guy Dawber, F.S.A., President, in the chair. The attendance

book was signed by 30 Fellows (including 8 Members of the Council), 17 Associates (including 1 Member of the Council), 8 Licentiates, 3 Hon. Associates, and a very large number of visitors.

The Minutes of the Meeting held on 14 December 1925, having been taken as read, were confirmed and signed by the President.

The Hon. Secretary announced the decease of: Leonard Aloysius Scott Stokes, elected Associate 1882, Fellow 1890, Pugin Student 1880, President of the Royal Institute during the Sessions 1910-1912, and recipient of the Royal Gold Medal in 1919. Vice-President 1905 to 1909; Member of Council 1890-1892, 1898-1904 and 1909-1910 (also as Past-President 1912-1913); Member of the Board of Architectural Education 1904-1913; Competitions Committee 1897-1900, 1911-1912; Prizes and Studentships Committee 1897-1904, 1909-1910; Executive Committee of the Town Planning Conference in 1910, and of the Seventh International Congress of Architects, 1906 and of numerous other Institute Committees. President of the Architectural Association from 1889-1891.

Benjamin Ingelow, elected Fellow 1882; Member of the Council from 1893-1899, Board of Examiners from 1889 to 1910, Literature Standing Committee from 1887 to 1904, and Prizes and Studentships Committee from 1893 to 1910.

Sir William Hamo Thornycroft, R.A., elected an Hon. Associate in 1910.

William George Cooke, elected Associate in 1880.

Thomas Merrison Garrod, elected Licentiate in 1911.

And it was resolved that the regrets of the Royal Institute for the loss of these members be recorded in the Minutes.

The following members attending for the first time since their election or transfer were formally admitted by the President:—

Mr. Wilfrid Bond [F.]

Mr. Ellis Marsland [F.]

Mr. W. J. Allcorn [A.]

Mr. E. F. Gilman [L.]

Mr. F. C. Wakeford [L.]

Dr. D. H. S. Cranage [Hon. Assoc.]

Professor J. E. A. Steggall [Hon. Assoc.]

Sir Charles A. Nicholson, Bart., M.A.Oxon., [F.] and Sir Francis Fox, J.P. [Hon. Assoc.], having read Papers on "Lincoln Cathedral," and illustrated them by lantern slides, a discussion ensued, and on the motion of the Very Rev. T. C. Fry, D.D., Dean of Lincoln, seconded by Mr. Basil Mott, C.B., a vote of thanks was passed to Sir Charles Nicholson and Sir Francis Fox by acclamation, and was briefly responded to.

The meeting closed at 9.50 p.m.

It is desired to point out that the opinions of writers of articles and letters which appear in the R.I.B.A. JOURNAL must be taken as the individual opinions of their authors and not as representative expression of the Institute.

Members sending remittances by postal order for subscriptions or Institute publications are warned of the necessity of complying with Post Office Regulations with regard to this method of payment. Postal orders should be made payable to the Secretary R.I.B.A., and crossed.

R.I.B.A. JOURNAL.

Dates of Publication.—1925: 7th, 21st November; 5th, 19th December. 1926: 9th, 23rd January; 6th, 20th February; 6th, 20th March; 10th, 24th April; 8th, 22nd May; 12th, 26th June; 17th July; 14th August; 18th September; 16th October.

